Clearinghouse Rule 97-087 97-087

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary

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December 3, 1997

Mr. Gary L. Poulson
Assistant Revisor of Statutes
131 West Wilson Street - Suite 800
Madison, WI

Dear Mr. Poulson:

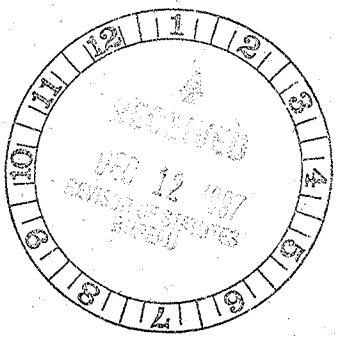
Enclosed are two copies, including one certified copy, of State of Wisconsin Natural Resources Board Order No. SW-36-96. These rules were reviewed by the Assembly Committee on Environment and the Senate Committee on Agriculture and Environmental Resources pursuant to s. 227.19, Stats. Summaries of the final regulatory flexibility analysis and comments of the legislative review committees are also enclosed.

You will note that this order takes effect following publication. Kindly publish it in the Administrative Code accordingly.

Sincerely,

George E. Meyer
Secretary

Enc.



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STATE OF WISCONSIN )
) ss
DEPARTMENT OF NATURAL RESOURCES )

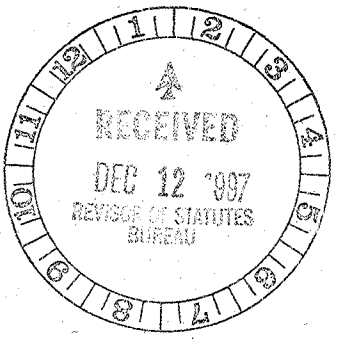
TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, George E. Meyer, Secretary of the Department of Natural Resources and custodian of the official records of said Department, do hereby certify that the annexed copy of Natural Resources Board Order No. SW-36-96 was duly approved and adopted by this Department on October 22, 1997. I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Natural Resources Building in the City of Madison, this 3rd day of December, 1997

George E. Meyer

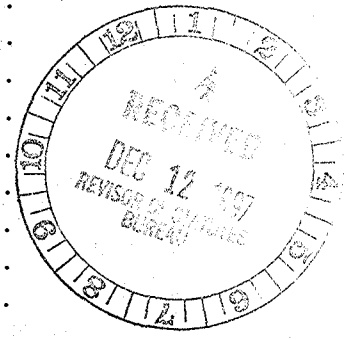
George E. Meyer, Secretary




(SEAL)

# ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD REPEALING, RENUMBERING, RENUMBERING AND AMENDING, AMENDING, REPEALING AND RECREATING AND CREATING RULES

IN THE MATTER OF repealing ss. NR 605.04(1)(b)9.b.(Note), 605.05(1)(first q)(Note) and (11)(d)1. and 2., 605.08(2)(a)1.(Note) and 3.(Note), (3)(a)2.(Note), (4)(a)8.(Note) and (5)(a)(Note), 605.09(2)(a)Table II(2nd Note), 605.10(1)(a)(Note), (1)(d)2.(Note) and (6)(Note), 605.13(1st Note), 605 Appendix I sub. (5)(Note), and (7)(Note), 605 Appendix II (2nd Note), 610.07(2)(2nd Note) and (3rd Note), 631.07(4)(a)3.(Note), 632.08(4)(b)(Note), 635.18(22)(e)5.(Note), 675.03(8)(a) to (c), 675.05(3)(c)(Note), 675.06(2)(Note), 675.07(1)(a)(Note), (c)2.(Note), (d)(intro.)(Note) and 3.(Note), (e)(intro.)(Note) and 2.(Note), (g)(Note), (2)(a)(Note), (d)1.b.(Note), (e)(Note) and (3)(b)(Note), 675.09(4)(c), 675.11(2)(Note), 675.13(2)(c)(Note), (4)(Note) and (5)(intro.)(Note), 675.15(8)(Note), 675.20(1)(Note), 675.21(1)(1st Note), 675.22 Table 2 and Table 3, 675.24(1)(e)(Note) and 675.30(1)(intro.)(Note) and (5)(Note) and ch. NR 675 Appendix IV, renumbering ss. NR 605.05(1)(first q) and (10)(b) and (c), 631.06(2)(l), 675.04(2), 675.07(2)(e)4. and 685.07(5)(h) to (i) renumbering and amending ss. NR 590.02(6), 590.04(1)(c), 590.37(1)(e) and (2)(e), 635.12(14)(c)3. and 675.09(4)(a), amending ss. NR 590.02(4)(a) and (5), 590.04(2)(d)2., 590.05(7)(c), 590.06(1)(Note) and (2)(b)1., 590.07(1), 590.10(3)(intro.), (3)(b) and (5), 590.11(1)(intro.)(Note), 590.13(intro.)(Note), 590.22(3)(e), 590.36(intro.)(Note), 590.53(intro.)(Note), 590.71(intro.), 590.73(intro.)(Note), 590.83(intro.), 600.03(92), (94) and 600.03(218), 600.10(1)(e), (2)(a)(intro.) and 48. and (b)(intro.), 1. and 3., 605.03(intro.), 605.04(1)(b)6.a., 7. and 9., 605.05(6)(b)3.a. and b., (8), (9)(a) and (b), and (10)(a)(intro.), 605.05(11)(c), (d) and 605.05(11)(e), 605.08(2)(a)1. and 3., (3)(a)1. and 2. and (5)(a), 605.09(2)(a) Table II Hazardous Waste Number F500, (b) Table III, (3)(b) Table IV and (c) Table V, 605.10(6)(Note), ch. NR 605 Appendix I subs. (6) and (7) and Appendices II to IV, ss. NR 610.05(4), 610.07(1)(c)1.f. and 2.c., (d) and (3)(f), 610.08(1)(d) and (2)(b), 615.05(3)(a)1., 2.b. and (b), (4)(a)2.(intro.), and a., 3.(intro.) and (c)(intro.), 615.06(6), 615.12(1)(intro.) and (1t)(g), 620.07(2)(a), 620.14(7) and (8), 625.04(1)(intro.), (a) and (b)(intro.) and 3., 625.06(intro.), 625.07(7)(a)5., 625.08(intro.), 625.09, 625.10, 625.12(1)(a), (2)(intro.) and (3)(a), 630.01, 630.04(3)(c), (11) and (14), 630.13(1)(f), 630.15(2)(d), 630.22(2)(a)2. and 5.f.(first Note), 630.31(1)(d) and (h), 630.40(3)(c), 631.02(2)(b), 631.06(2)(a)2. and (f)2.f. and (k), 631.07(2)(intro.) and (4)(a)3., 631.08(4), 632.02(2)(intro.) and (b), 632.06(4), 632.08(4)(b), 632.10(13), 635.10(1) and (2) and 635.12(14)(c)1. and (c)2., ch. NR 635 Appendix 1 Note 5, ss. NR 645.09(1) and 645.16(3)(e), ch. NR 655(Title), ss. NR 656.07(1)(a) and (4)(a)(intro.), 660.04(1), 660.18(7), 660.22(2)(b), 665.06(1)(d)1.d. and 2., 665.09(16)(a)1., 670.08(intro.), 670.10(2), 675.03(8)(intro.), 675.06(1) and (2), 675.07(2)(a), (e)1. and 3. and (3)(b), 675.09(1), (4)(intro.), (a) and (b) and (5), 675.13(4), 675.22(1)(intro.), (4)(b) and (5), 675.24(1)(a), 675.25(2)(b), 680.02, 680.06(3)(e) and (k), 680.09(3)(a), 680.40(2) and 680.45 Tables XII and XIII, ch. NR 680 Appendix I, ss. NR 685.04, 685.05(1)(c), (d) and (f), (2)(j) and (3)(a), 685.06(5)(intro.), 685.07(3)(a)(intro.), (b)1., (4)(a)(intro.) and (b)1. and (5)(a)2., (c), (d) and (g)3. and (9), 685.08(3)(a), (7)(a) and (b), (8)(d)1., (9)(c) and (10)(f), repealing and recreating ss. NR 600.10(2)(c), 605.05(1)(x), 675.03(1)(Note), 675.07(1), 675.20, 675.21, 675.23, 675.26, and ch. NR 675 Appendix III, 685.07(5)(g)2. and (7)(title) and (a) to (c) and creating ss. NR 182.04(30)(Note), 590.02(6)(b) to (e), 590.03(33m), 590.04(1)(c)2. to 7., 590.37(1)(e)2. and (2)(e)2., 590.50(4), 590.71(5), 590.83(5), 600.02(2)(Note), 600.03(18m), (23m), (56m), (171m), (229m), (249m), (249p) and (249z), 600.06(5), 600.10(2)(a)(intro.)(Note), 52., 53., 53.Note and 54., 605.02(Note), 605.03(1) and (2), 605.04(1)(b)10., 605.05(2)(c) to (i), (10)(b) and (c) and (12) and 605.10(7), and ch. NR 605 Appendix V, ss. NR 610.07(1)(c)1.g. and 2.d., and (1m), 615.14, 620.05(5), 625.02(3)(Note), 625.04(8), 630.04(16) to (18), 630.10(1m), 630.13(1)(i), 630.20(2)(c), 630.30(5m), 631.06(2)(k)(intro.), (l), (n) and (o), 632.02(2)(c) and 632.11(4), ch. NR 633, ss. NR 640.06(2)(h), 640.13(4), 645.06(1)(i)12., 645.10(6), 660.13(1)(j)20., 660.18(40), 665.06(1)(d)10., 675.02(3)(Note), 675.03(1m), (1p), (4m), (7m) and (7p), 675.04(2), (3) and (4), 675.06(3), 675.07(2)(e)4. and 5., 675.09(4)(a)2., (6) and (7), 675.17, 675.18, 675.19, 675.22(intro.)(Note) and Table 1 Entry "CMBST" and 675.28, ch. NR 675 Appendix VIII and Appendix IX, ss. NR 680.03(3m), 680.06(1m), (3)(n), (8m) and (15), 680.22(36), 680.42(18m), 685.07(5)(h), and ch. NR 690 of the Wisconsin Administrative Code pertaining to hazardous waste management.




SW-36-96

Analysis Prepared by the Department of Natural Resources

Statutory Authority: ss. 289.05(1), 289.06(1)(a), 289.30, 289.43, 299.53, 291.001, 291.05, 291.07, 291.09, 291.11 and 227.11(2)(a), Stats.

Statutes interpreted: ss. 289.41 and 289.46, ch. 291, ss. 299.45 and 299.53, Stats.

This order amends the hazardous waste rules in chs. NR 600 to 685, Wis. Adm. Code. The order assimilates recent revisions in U.S. Environmental Protection Agency (EPA) regulations, includes some State-initiated actions and corrects errors in chs. NR 600 to 685 Wis. Adm. Code:

1. Organic Air Emissions

A new chapter NR 633 will be created which will adopt 40 CFR Part 264 Subpart CC. EPA adopted final air emissions standards which will further reduce organic emissions from hazardous waste management activities. The air standards apply to owners and operators of hazardous waste treatment, storage and disposal facilities (TSDF) subject to hazardous waste licensing requirements and to certain hazardous waste generators accumulating waste on-site in tanks and containers which are exempt from hazardous waste licensing.

2. Land Disposal Restrictions (LDRs)

EPA has adopted, and the Department proposes to adopt in this package, standards which will simplify the LDR program by establishing one set of concentration based treatment standards for each hazardous constituent, regardless of the restricted waste the constituent is a component of. This is in contrast to the previous system where treatment levels for a particular constituent could vary between different restricted wastes.

3. Universal Wastes Rule

This rule promulgates streamlined hazardous waste management regulations governing the collection and management of certain widely used wastes known as universal wastes. This rule will cover batteries, pesticides that are either recalled or collected in waste pesticide collection programs, thermostats. This rule's purpose is to greatly ease the regulatory burden on retail stores and establishments or individuals that wish to collect or generate the three universal wastes.

4. Waste Listings

Several changes in the Federal waste listings were adopted to maintain consistency with the Federal program. These include chlorophenolic formulations in wood surface protection; a technical amendment pertaining to wood surface protection; a correction of beryllium powder (P015) listing; amendments of the definition of solid waste relating to used oil; recyclable materials used in a manner constituting disposal; and carbamate production wastes.

5. Treatability Studies

The existing Treatability Sample Exemption Rule conditionally exempted from hazardous waste regulation samples of hazardous waste collected for purposes of conducting small-scale treatability studies. This rule revises that existing rule, primarily by increasing the quantity and time limits for major classes of contaminated media, specifically soil and debris, used in treatability studies without triggering hazardous waste management requirements. Larger quantities of contaminated media are often needed for treatability testing by technology developers and larger-scale testing will also greatly increase confidence with which remedial action decision-makers make remedy selection, thus improving clean-up actions.

6. Used Oil Management

Revisions to the used oil management standards, ch. NR 590, are proposed to adopt technical revisions to the Federal rules upon which ch. NR 590 is based. The existing pipeline exemption has been clarified and the exemption has been expanded to apply to other petroleum refinery applications.

7. Expanded Public Participation

EPA issued new regulations to improve the process for permitting facilities that store, treat, or dispose of hazardous wastes by providing earlier opportunities for public involvement in the process and by expanding public access to information throughout the permitting process and operational lives of facilities. The Department proposes to modify its licensing provisions at this time to the extent that Wisconsin's regulations do not already provide the expanded opportunities for public participation provided by the new Federal regulations.

8. Imports and Exports of Hazardous Waste; Implementation of OECD Council Decision

The rule identifies the wastes that are subject to a graduated system (green, amber, red) of procedural and substantive controls when they move across national borders within the Organization for Economic Cooperation and Development (OECD) for recovery. Because this rule involves implementation of international law and agreements, it appears that implementation of the rule will largely be the responsibility of EPA, rather than the States. Therefore, a portion of the rule will be adopted as part of the Wisconsin regulations, while a substantial portion, 40 CFR Part 262, Subpart H, has been incorporated by referring the reader to that portion of the Federal regulations.

9. Miscellaneous Federal Revisions

Several Federal Register publications were reviewed and revisions to the Wisconsin rules drafted, where needed. The primary topic of these revisions were periodic updates to the citation for EPA Method SW-846, relating to testing and monitoring activities.

10. Revisions to Financial Assurance Requirements for Hazardous Waste Facilities

Revisions have been made to formulae used to determine financial assurance mechanisms for hazardous waste facilities. These formulae, as revised, are simpler and more closely track analagous Federal provisions. These revisions are designed to mirror recent changes to provisions in the Solid Waste Management Code.

11. Generator Treatment

A Federal provision which allows generators to treat hazardous waste in containers or tanks in which the waste is accumulated has been adopted.

12. Housekeeping Changes

Various cross-referencing errors have been corrected and other revisions to numbering and language have been made throughout existing provisions of chs. NR 600 to 685 to improve clarity.

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SECTION 1. NR 182.04(30)(Note) is created to read:

NR 182.04(30)Note: For a more specific list of metallic mining wastes see s. NR 605.05(1)(j) and (k).

SECTION 2. NR 590.02(4)(a) and (5) are amended to read:

NR 590.02(4)(a) Except as provided in s. NR 590.04(1)(b), mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under this chapter.

(5) Materials produced from used oil, or containing or otherwise contaminated with used oil, that are burned for energy recovery are subject to regulation as used oil under this chapter.

SECTION 3. NR 590.02(6) is renumbered NR 590.02(6)(a) and amended to read:

NR 590.02(6)(a) Used oil that is placed directly into a crude oil or natural gas pipeline is subject to the management standards of this chapter prior to the point of introduction to the pipeline.

Note: Once used oil is introduced into a pipeline, the material is exempt from this chapter, as stated in s. NR ~~590.04(1)(d)~~ 590.04(1)(c).

SECTION 4. NR 590.02(6)(b) to (e) are created to read:

NR 590.02(6)(b) Used oil mixed with crude oil or natural gas liquids in a production separator, crude oil stock tank or other similar device for insertion into a crude oil pipeline is subject to this chapter prior to the mixing of used oil with crude oil or natural gas liquids.

(c) Prior to insertion into the petroleum refining facility process, used oil that is to be inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is subject to this chapter.

(d) Prior to insertion into the petroleum refining facility process, used oil that is to be introduced into a petroleum refining facility process after crude distillation or catalytic cracking is subject to this chapter.

(e) Used oil which is intentionally introduced into a hydrocarbon recovery system by pouring collected used oil into the waste water treatment system, or by other means of introduction, is subject to this chapter.

SECTION 5. NR 590.03(33m) is created to read:

NR 590.03(33m) "Petroleum refining facility" means an establishment primarily engaged in producing gasoline, kerosine, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes.

Note: These facilities are classified as Standard Industrial Code (SIC) 2911.

SECTION 6. NR 590.04(1)(c) is renumbered 590.04(1)(c)1. and is amended to read:

NR 590.04(1)(c)1. Used oil introduced into crude oil ~~or~~ , natural gas pipelines or a petroleum refining facility. Used oil that is placed directly into a crude oil or natural gas pipeline is exempt from the requirements of this chapter once the used oil is introduced to the pipeline.

Note: Prior to the point of introduction to the pipeline the used oil is subject to the management standards of this chapter, as stated in s. NR ~~590.02(6)~~ 590.02(6)(a).

SECTION 7. NR 590.04(1)(c)2. to 7. are created to read:

NR 590.04(1)(c)2. Used oil mixed with crude oil or natural gas liquids in a production separator, crude oil stock tank or other similar device for insertion into a crude oil pipeline is exempt from this chapter.

Note: Prior to the mixing of used oil with crude oil or natural gas liquids the used oil is subject to the management standards of this chapter, as stated in s. NR 590.02(6).

3. Mixtures of used oil and crude oil or natural gas liquids containing less than 1% used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion into the refining process at a point prior to crude distillation or catalytic cracking are exempt from this chapter.

4. Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from this chapter provided that the used oil constitutes less than 1% of the crude oil feed to any petroleum refining facility process unit at any given time.

Note: Prior to insertion into the petroleum refining facility process, the used oil is subject to this chapter.

5. Used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from this chapter if it meets one of the following requirements:

a. The used oil meets the specifications of s. NR 590.09.

b. The used oil meets the conditions described in subd. 5.

Note: Prior to insertion into the petroleum refining facility process, the used oil is subject to this chapter.

6. Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from this chapter.

Note: This exemption does not extend to used oil which is intentionally introduced into a hydrocarbon recovery system, for instance, by pouring collected used oil into the waste water treatment system.

7. Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from this chapter.

SECTION 8. NR 590.04(2)(d)2. is amended to read:

NR 590.04(2)(d)2. Are subject to solid waste regulations and to hazardous waste regulations if the materials are <u>listed or</u> identified as hazardous waste.

SECTION 9. NR 590.05(7)(c) is amended to read:

NR 590.05(7)(c) Hazardous waste incinerators subject to regulation under ch. NR 665 ~~or 40 CFR 266 subpart H~~.

SECTION 10. NR 590.06(1)Note and (2)(b)1. are amended to read:

NR 590.06(1)(Note) The following regulations may apply: ~~(a) Chapters NR 158, "Notification of the Discharge of Hazardous Substances," and NR 705 – "Discharge Reporting and Source Confirmation for Underground Storage Tank Systems."~~ Chapter NR 706, "Hazardous Substance Discharge Notification and Source Confirmation Requirements"; ~~(b)~~ Chapters NR 500 to 520 - "Solid and Hazardous Waste Management~~."~~; ~~(c)~~ Chapters NR 600 to 685 - "Hazardous Waste Management~~."~~; ~~(d)~~ Chapter ILHR 10 - "Flammable and Combustible Liquids~~."~~ ; and ~~(e)~~ Chapters NR 700 to 736, "Investigation and Remediation of Environmental Contamination."

(2)(b)1. Comply with the requirements of s. ~~144.76~~ ch. 292, Stats., and ~~chs. NR 158 and 705~~ ch. NR 706.

SECTION 11. NR 590.07(1) is amended to read:

NR 590.07(1) EXISTING ACTIVITIES. ~~Except as provided in sub. (5), any~~ Any person subject to subchs. IV to VII shall, within 90 days of June 1, 1995, notify the department and EPA of the activities and obtain an EPA identification number, unless that person has previously notified the EPA in compliance with the notification requirements of 42 USC 6930, or is otherwise exempted from this chapter under s. NR 590.04.

SECTION 12. NR 590.10(3)(intro.), (3)(b) and (5) are amended to read:

NR 590.10(3) CHARACTERISTIC HAZARDOUS WASTE. Mixtures of used oil and hazardous waste that solely exhibits one or more hazardous waste characteristic identified in s. NR 605.08 and mixtures of used oil and hazardous waste that is listed in s. NR 605.09 solely because it exhibits one or more hazardous waste characteristic identified in s. NR 605.08 are subject to:

(b) ~~Regulation~~ Except as provided in par. (c), regulation as used oil under this chapter, if the resultant mixture does not exhibit any characteristics of hazardous waste identified under s. NR 605.08.

(5) MIXTURES OF USED OIL WITH NON-HAZARDOUS SOLID WASTES. Mixtures of used oil and non-hazardous solid waste are subject to regulation as used oil under this chapter ~~provided the mixing is conducted in accordance with a solid waste processing license issued under ch. NR 502~~.

Note: The act of mixing used oil and non-hazardous solid waste may require a solid waste processing license issued under ch. NR 502. Please see ch. NR 502 for the requirements described there.

SECTION 13. NR 590.11(1)(intro.)(Note) is amended to read:

NR 590.11(1)Note: An analytical method from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, Third Edition ~~III~~, November 1986, as amended by Update I in July 1992, Update II in September 1994, Update IIA in August 1993, Update IIB in January 1995 and Update III in December 1996 is an example of a method that could be used to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix IV of ch. NR 605.

Note: EPA Publication SW-846, Third Edition, ~~is~~ and Updates I, II, IIA, IIB and III are available from the ~~Government Printing Office,~~ Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 ~~202-783-3238~~ (202) 512-1800 (document number 955-001-00000-1).

SECTION 14. NR 590.13(intro.)Note is amended to read:

NR 590.13(intro.)Note: Used oil generators are also responsible for complying with the requirements of ~~chs. NR 158 and 705~~ ch. NR 706.

SECTION 15. NR 590.22(3)(e) is amended to read:

NR 590.22(3)(e) The owner or operator of the center shall comply with all applicable environmental protection statutes and administrative rules, including ~~s. 144.76~~ ch. 292, Stats., and ~~chs. NR 158 and 705~~ ch. NR 706.

SECTION 16. NR 590.36(intro.)Note is amended to read:

NR 590.36(intro.)Note: Used oil transporters are also responsible for complying with the applicable provisions of ~~chs. NR 158 and 705~~ ch. NR 706.

SECTION 17. NR 590.37(1)(e) is renumbered 590.37(1)(e)1. and is amended to read:

NR 590.37(1)(e)1. ~~The~~ Except as provided in subd. 2., the signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor or re-refiner who provided the used oil for transport.

SECTION 18. NR 590.37(1)(e)2. is created to read:

NR 590.37(1)(e)2. Intermediate rail transporters are not required to sign the record of acceptance.

SECTION 19. NR 590.37(2)(e) is renumbered 590.37(2)(e)1. and is amended to read:

NR 590.37(2)(e)1. ~~The~~ Except as provided in subd. 2., the signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter.

SECTION 20. NR 590.37(2)(e)2. is created to read:

NR 590.37(2)(e)2. Intermediate rail transporters are not required to sign the record of delivery.

SECTION 21. NR 590.50(4) is created to read:

NR 590.50(4) Transporters that remove used oil from oil bearing electrical transformers and turbines and filter it or have it filtered at a transfer facility prior to being returned to its original use.

SECTION 22. NR 590.53(intro.)Note is amended to read:

NR 590.53(intro.)Note: Used oil processors or re-refiners are also responsible for complying with the applicable provisions of ~~chs. NR 158 and 705~~ ch. NR 706.

SECTION 23. NR 590.71(intro.) is amended to read:

NR 590.71(intro.) Used oil burners who conduct the following activities are also subject to the requirements of other applicable provisions ~~of this chapter~~ as follows:

SECTION 24. NR 590.71(5) is created to read:

NR 590.71(5) In addition to the requirements of this chapter, burners of used oil who market used oil containing any quantifiable level of PCBs are subject to the requirements of ch. NR 157 and 40 CFR 761.20(e).

SECTION 25. NR 590.73(intro.)Note is amended to read:

NR 590.73(intro.)Note: Used oil burners are also responsible for complying with the applicable provisions of ~~chs. NR 158 and 705~~ ch. NR 706.

SECTION 26. NR 590.83(intro.) is amended to read:

NR 590.83(intro.) Any person subject to the requirements of this subchapter shall also comply with one or more of the following:

SECTION 27. NR 590.83(5) is created to read:

NR 590.83(5) In addition to the requirements of this chapter, marketers of used oil who market used oil containing any quantifiable level of PCBs are subject to the requirements of ch. NR 157 and 40 CFR 761.20(e).

SECTION 28. The CFR references in the following sections are amended to refer to the July 1996 edition of the CFR: NR 600.03(56); 605.05(1)(p); 605.10(1)(d)2.; 605.13; 610.07(1)(c)1.b.; 610.08(1)(w)3.d.; 620.10(2); 630.22(1)(g); 645.12(4)(a)(1st note); 645.12(6)(3rd note); 665.07(2)(a)10.; 665.09(15)(f); 675.07(1)(a), (b), (c)(intro.), (c)1., 2. (d)(intro.) (d)(2), (2)(a) & (b), (c)(intro.), (c)1., 2., (d)(intro.) (d)(2), and (e); 675.15(8); 675.24(1)(a), (b), (c)(intro.), (c)1., 2. and (d)2.; 675.30(4)(Note); 680.02(Note); 680.06(10)(a)1. and 2.; 680.06(12)(a)1. and 3. and 680.07(6)(b).

SECTION 29. The CFR references in the following sections are amended to refer to the October 1996 edition of the CFR: NR 600.03(65); 605.08(4)(a)8.; 610.08(1)(j), (k) and (l); 615.08(7)(f); 615.10(1), (2)(intro.) and (3); 615.12(1)(a)2.a.; 620.10(1)(b) and (c); 620.11(2), (3) and (4) and 660.18(8)(c)2. and 6.

SECTION 30. NR 600.02(2)(Note) is created to read:

NR 600.02(2)Note: For a more specific list of metallic mining wastes see s. NR 605.05(1)(j) and (k).

SECTION 31. NR 600.03(18m), (23m), and (56m) are created to read:

NR 600.03(18m) "Battery" means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode and an electrolyte, plus such electrical and mechanical connections as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

(23m) "Captive insurance company" means a closely-held company owned by one or more organizations, parents, whose original purpose was and may continue to be, to insure some or all of the risks of shareholders or affiliated organizations.

(56m) "Destination facility" means a facility that treats, disposes of or recycles a particular category of universal waste. A facility at which a particular category of universal waste is only accumulated is not a destination facility for purposes of managing that category of universal waste.

Note: For purposes of this subsection, "treats, disposes of or recycles" does not include the management activities described in ss. NR 690.13(1) and (3) and 690.33(1) and (3).

SECTION 32. NR 600.03(92) and (94) are amended to read:

NR 600.03(92) "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure. ~~To demonstrate the absence or presence of free liquids, the EPA method 9095, paint filter liquids test, described in SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", third edition, September, 1986, as amended by update I in July, 1993, shall be used.~~

Note: To demonstrate the absence or presence of free liquids, method 9095, paint filter liquids test, described in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", third edition, as incorporated by reference in s. NR 600.10(2)(b)1. and (c) may be used.

~~Note: Publication SW-846 may be obtained from:~~

~~Superintendent of Documents~~
~~U.S. Government Printing Office~~
~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state, and the revisor of statutes.~~

(94) "Generator" means any person, by generation site, whose act or process produces a hazardous waste identified or listed in chs. NR 605~~, 610 and 625~~ or whose act first causes a hazardous waste to become subject to regulation under chs. NR 600 to ~~685~~ 690.

SECTION 33. NR 600.03(171m) is created to read:

NR 600.03(171m) "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant, other than any article that either:

(a) Is a new animal drug under 21 USC s. 321(w), or

(b) Is an animal drug that has been determined by regulation of the secretary of the U.S. department of health and human services not to be a new animal drug, or

(c) Is an animal feed under 21 USC s. 321(x) that bears or contains any substances described by par. (a) or (b).

SECTION 34. NR 600.03(218) is amended to read:

NR 600.03(218) "Substantial business relationship" means the extent of a business relationship necessary ~~under~~ to make a guarantee contract issued incident to that relationship valid and enforceable. A substantial business relationship shall arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the department.

SECTION 35. NR 600.03(229m), (249m), (249p) and (249z) are created to read:

(229m) "Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices.

Note: Sections NR 690.13(3)(b) and 690.33(3)(b) specify requirements for the removal of mercury-containing ampules from thermometers.

(249m) "Universal waste" means any of the following hazardous wastes that are managed under the universal waste requirements of ch. NR 690:

(a) Batteries as described in s. NR 690.05.

(b) Pesticides as described in s. NR 690.06.

(c) Thermostats as described in s. NR 690.07.

(249p) "Universal waste handler" means a generator of universal waste or the owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination. Universal waste handler does not include a person who treats, disposes of or recycles universal waste, or

a person engaged in the off-site transportation of universal waste by air, rail, highway or water, including a universal waste transfer facility.

Note: For purposes of this subsection, "treats, disposes of or recycles universal waste" does not include the management activities described in ss. NR 690.13(1) and (3) and 690.33(1) and (3).

(249z) "Universal waste transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway or water.

SECTION 36. NR 600.06(5) is created to read:

NR 600.06(5) Notwithstanding sub. (2), any records, reports or other information submitted to the department or EPA that is information required by s. NR 615.12 and 40 CFR 262.83 that is submitted in a notification of intent to export a hazardous waste will be provided to the U.S. department of state and the appropriate authorities in the transit and receiving or importing countries regardless of any claims of confidentiality. However, if no claim accompanies the information when it is received by EPA, it may be made available to the public without further notice to the person submitting it.

SECTION 37. NR 600.10(1)(e), (2)(a)(intro.) and (a)48. are amended to read:

NR 600.10(1)(e) 40 CFR 60, ~~Section V and~~ subpart VV and 40 CFR 61 subpart V, for s. NR 632.09(13).

(2)(a)(intro.) American Society for Testing and Materials (ASTM)
~~1916 Race Street~~
~~Philadelphia, PA 19103-1187~~
~~(215) 299-5400~~
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

(a)48. ASTM standard E-169-87, "Standard Practices for General ~~techniques~~ Techniques of ~~Ultra-Violet~~ Ultraviolet-Visible Quantitative Analysis," for s. NR 632.08(4)(a).

SECTION 38. NR 600.10(2)(a)(intro.)Note, 52., 53., 53.Note and 54. are created to read:

NR 600.10(2)(a)(intro.)Note: The references listed in this subsection are also available for inspection at:

Office of the Federal Register
800 North Capitol St., NW.
Suite 700

Washington, D.C.

52. "ASTM Standard Test Methods for Preparing Refuse-Derived Fuel (RDF) Samples for Analyses of Metals," ASTM Standard E926-94, Test Method C-Bomb, Acid Digestion Method.

53. API Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks."

Note: This publication is available from:

American Petroleum Institute
1220 L Street, NW
Washington, D.C. 20005

54. "ASTM Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope," ASTM Standard D 2879-96.

SECTION 39. NR 600.10(2)(b)(intro.), (b)1. and 3. are amended to read:

NR 600.10(2)(b) U.S Environmental Protection Agency
Office of Solid Waste

Available from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) ~~487-4600~~ 487-4650

1. SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", third edition, November 1986, as amended by ~~update~~ updates I in July, 1992, ~~NTIS document number PB87-120-291,~~ II in September 1994, IIA in August 1993, IIB in January 1995 and III in December 1996, for ss. NR 600.03(92), 605.04(1)(b)9., 605.08(3)(a)1. and 2., 605.09(2)(a) F500, 605 ~~Appendix I (6) and (7),~~ Appendix II, 631.07(4)(a)3., 631.08(4)(b), 633.03(24), 633.06(1)(c)2.c., 3.(intro.), f. and g., (2)(c)2.c., 3.(intro.), f. and g. and (3)(c)1.intro., 645.09(1), 660.18(7), 665.06(1)(d)1.d., (d)2., (e)1.c. and d. and 675.07(1)(a), (b), ~~(g)~~ (h), (2)(a), (3)(b), 675.13(4)~~, 675.20(1), 675.21(1) and 675.23(1) Table CCW Note 3~~ and 675.20(2)(c), (7) and Treatment Standards for Hazardous Wastes Table Note 7.

3. ~~EPA-450/2-81-005~~ EPA-450/R-92-019, ~~APTI Course 415: Control of Gaseous Emissions, December 1981~~ "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised" October 1992, Research Triangle Park, NC, for ss. NR 631.08(2)(d)3., 632.11(2)(d)3. and 632.11(3)(e)3.

SECTION 40. NR 600.10(2)(c) is repealed and recreated to read:

NR 600.10(2)(c) U.S. Environmental Protection Agency
Office of Solid Waste

Available from:

Superintendent of Documents
U.S. Government Printing Office
P.O. Box 371954
Pittsburgh, PA 15250-7954
(202) 512-1800

SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", third edition, November 1986, as amended by updates I in July 1992, II in September 1994, IIA in August 1993 ~~and~~ , IIB in January 1995, and III in December 1996, GPO document number 955-001-000000-1, for ss. NR 600.03(92), 605.04(1)(b)9., 605.08(3)(a)1. and 2., 605.09(2)(a) F500, 605 Appendix II, 631.07(4)(a)3., 631.08(4)(b), 633.03(24), 633.06(1)(c)2.c., 3.(intro.), f. and g., (2)(c)2.c., 3.(intro.), f. and g. and (3)(c)1.intro., 645.09(1), 660.18(7), 665.06(1)(d)1.d. and 2., (e)1.c. and d. and 675.07(1)(a), (b), (h), (2)(a), (3)(b), 675.13(4) and 675.20(2)(c), (7) and Treatment Standards for Hazardous Wastes Table Note 7.

SECTION 41. NR 605.02(Note) is created to read:

NR 605.02(Note) The following references cited in this chapter: Code of Federal Regulations (CFR) and Title 42 of the United States Code, may be obtained from:

Superintendent of Documents
U.S. Government Printing Office
P.O. Box 371954
Pittsburgh, PA 15250-7954
(202) 783-3238

The ASTM references cited in this chapter may be obtained from:

American Society for Testing and Materials
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

These publications are available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

SECTION 42. NR 605.03(intro.) is amended to read:

NR 605.03(intro.) The definitions in s. NR 600.03 apply to this chapter. In addition, the following definitions also apply to this chapter:

SECTION 43. NR 605.03(1) and (2) are created to read:

NR 605.03(1) "Reclaimed" means to process a material to recover a usable product, or to regenerate a material.

Note: Examples of reclaiming a material are to recover lead values from spent batteries and the regeneration of spent solvents.

(2) "Used or reused" means either:

(a) To employ a material as an ingredient, including use as an intermediate, in an industrial process to make a product.

Note: An example of this type of use or reuse is to use distillation bottoms from one process as feedstock in another process. A material is not considered to be reused if distinct components of the material are recovered as separate end products, as when metals are recovered from metal-containing secondary products.

(b) To employ a material in a particular function or application as an effective substitute for a commercial product.

Note: An example of this type of use or reuse is to use spent pickle liquor as phosphorus precipitant and sludge conditioner in wastewater treatment.

SECTION 44. NR 605.04(1)(b)6.a., 7. and 9. are amended to read:

NR 605.04(1)(b)6.a. Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth ~~furnace or electric~~ furnace-electric furnace combinations or industrial furnaces~~, as defined in s. NR 600.03,~~ that are disposed in units subject to chs. NR 500 to ~~520~~ 524, provided that these residues meet the generic exclusion levels identified in the tables in this subdivision for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements shall be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues shall be collected and analyzed quarterly or when the process or operation generating the waste changes.

7. It is a mixture of nonhazardous solid waste and a hazardous waste that is listed in s. NR 605.09 solely because it exhibits one or more of the characteristics of hazardous waste identified in s. NR 605.08, unless the resultant mixture no longer exhibits any characteristic of

hazardous waste identified in s. NR 605.08, or unless the solid waste is excluded from regulation under s. NR ~~605.05(1)(l)~~ 605.05(1)(k) and the resultant mixture no longer exhibits any characteristic of hazardous waste identified in s. NR 605.08 for which the hazardous waste listed in s. NR 605.09 was listed.

Note: Nonwastewater mixtures are still subject to the requirements of ch. NR 675, even if they no longer exhibit a characteristic at the point of land disposal.

Note: The process of mixing a nonhazardous solid waste and a hazardous waste may require a license under ch. NR 680 for hazardous waste treatment.

9. It is used oil containing greater than or equal to 1000 ppm total halogens. Used oil containing greater than or equal to 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in s. NR 605.09. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste, for example, by using an analytical method from EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", third edition, ~~September, 1986, as amended by update I in July, 1992,~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c) to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix IV.

SECTION 45. NR 605.04(1)(b)9.b.(Note), 605.05(1)(first q)(Note), 605.08(2)(a)1.(Note) and 3.(Note), (3)(a)2.(Note), (4)(a)8.(Note) and (5)(a)(Note), 605.09(2)(a)Table II(2nd Note), 605.10(1)(a)(Note), (1)(d)2.(Note) and (6)(Note), 605.13(1st Note), 605 Appendix I sub. (5)(Note) and (7)(Note) and 605 Appendix II (2nd Note) are repealed.

SECTION 46. NR 605.04(1)(b)10. is created to read:

NR 605.04(1)(b)10. Waste from burning any of the materials exempted from regulation by s. NR 605.05(2)(c) to (e).

SECTION 47. The first of the two paragraphs numbered NR 605.05(1)(q) is renumbered NR 605.05(1)(p).

SECTION 48. NR 605.05(1)(x) is repealed and recreated to to read:

NR 605.05(1)(x) Recovered oil from petroleum refining, exploration and production, and from transportation incident thereto, which is to be inserted into the petroleum refining process (SIC Code 2911) along with normal process streams prior to crude distillation or catalytic cracking. This exclusion applies to recovered oil stored or transported prior to insertion, except that the oil may not be stored in a manner involving placement on the land, and may not be accumulated speculatively, before being recycled. Recovered oil is oil that has

been reclaimed from secondary materials, such as wastewater, generated from normal petroleum refining, exploration and production and transportation practices. Recovered oil includes oil that is recovered from refinery wastewater collection and treatment systems, oil recovered from oil and gas drilling operations and oil recovered from wastes removed from crude oil storage tanks. Recovered oil does not include oil-bearing hazardous wastes listed in s. NR 605.09. However, oil recovered from those wastes may be considered recovered oil. Recovered oil also does not include used oil.

Note: Oil-bearing hazardous wastes listed in s. NR 605.09 include K048 to K052, F037 and F038.

SECTION 49. NR 605.05(2)(c) to (i) are created to read:

NR 605.05(2)(c) Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility if the wastes result from normal petroleum refining, production and transportation practices.

Note: This exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where the recovered oil is already exempt under s. NR 605.05(1)(x).

(d) 1. Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production or transportation practices, or produced from oil reclaimed from these hazardous wastes, where these hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil, provided that the resulting fuel meets the used oil specifications in s. NR 590.09 and no other hazardous wastes are used to produce that hazardous waste fuel.

2. Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, provided the resulting fuel meets the used oil specification in s. NR 590.09.

3. Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production and transportation practices which is burned as a fuel without reintroduction to a refining process, provided the resulting fuel meets the used oil specifications in s. NR 590.09.

(e) Petroleum coke produced from petroleum refinery hazardous wastes containing oil by the same person who generated the waste, unless the resulting coke product exceeds one or more of the characteristics of hazardous waste in s. NR 605.08.

(f) Sludges exhibiting a characteristic of hazardous waste that are reclaimed and comply with subs. (3) and (4).

Note: This exclusion does not apply to sludges listed in s. NR 605.09.

(g) Materials which are recycled by being:

1. Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed.

2. Used or reused as effective substitutes for commercial products.

3. Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material shall be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the materials shall be managed such that there is no placement on the land.

(h) The following materials are subject to regulation even if the recycling involves use, reuse or return to the original process as described in par. (g):

1. Materials used in a manner constituting disposal, or used to produce products that are applied to the land.

2. Materials burned for energy recovery, used to produce a fuel or contained in fuels.

3. Materials accumulated speculatively.

4. Materials listed in par. (i).

(i) The following wastes are solid wastes when they are recycled in any manner:

Note: The wastes referred to in this paragraph are referred to in analogous Federal rules as "inherently waste-like materials."

1. Hazardous Waste Nos. F020, F021 when it is not used as an ingredient to make a product at the site of generation, F022, F023, F026 and F028.

2. Secondary materials fed to a halogen acid furnace that exhibit a characteristic of hazardous waste or are listed as a hazardous waste as defined in ss. NR 605.08 and 605.09 except for brominated material that meets all of the following criteria:

a. The material shall contain a bromine concentration of at least 45%.

b. The material shall contain less than a total of 1% of toxic organic compounds listed in ch. NR 605 appendix IV.

c. The material is processed continually on-site in the halogen acid furnace via a direct conveyance such as hard piping.

3. The department will add a waste to the list if the material may pose a substantial hazard to human health and the environment when recycled and if either of the following are true:

a. The materials are ordinarily disposed of, burned or incinerated.

b. The materials contain toxic constituents listed in ch. NR 605 appendix IV and these constituents are not ordinarily found in raw materials or products for which the materials substitute, or are found in raw materials or products in smaller concentrations and are not used or reused during the recycling process.

SECTION 50. NR 605.05(6)(b)3.a. and b., (8), (9)(a) and (b), and (10)(a)(intro.) are amended to read:

NR 605.05(6)(b)3.a. Rinses shall be tested in accordance with SW-846 as incorporated by reference in s. NR 600.10(2)(b)1. and (c), Method ~~8920~~ 8290.

b. "Not detected" means at or below the lower method calibration limit (MCL) in Method ~~8920~~ 8290, Table 1.

(8) TREATABILITY STUDIES SAMPLES. Except as provided in sub. (9), persons who generate or collect samples for the purpose of conducting treatability studies are not subject to any requirement of chs. NR 610 to 699 when any of the following activities are conducted:

(a) The sample is being collected and prepared for transportation by the generator or sample collector~~;~~ .

(b) The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility~~;~~ .

(c) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study~~; or~~ .

~~(d) The sample shipment is accompanied by a manifest, according to the requirements of s. NR 615.08.~~

(9)(a) The generator or sample collector uses in treatability studies no more than 10,000 kg of media contaminated with non-acute hazardous waste, 1000 kg of any non-acute hazardous waste other than contaminated media, 1 kg of acute hazardous waste, or ~~250~~ 2,500 kg of soils, water or debris contaminated with acute hazardous waste for each process being evaluated for each generated waste stream~~;~~.

(b) The mass of each sample shipment does not exceed ~~1000 kg of~~ 10,000 kg. The 10,000 kg quantity may be all media contaminated with non-acute hazardous waste, or may

include 1 kg of acute hazardous waste ~~or 250~~ , 1,000 kg of hazardous waste or 2,500 kg of soils, water or debris contaminated with acute hazardous waste~~;~~.

(10)(a) The department may grant requests, on a case-by-case basis, for up to an additional 2 years for treatability studies involving bioremediation. The department may grant requests on a case-by-case basis for quantity limits in excess of those specified in sub. (9)(a), for up to an additional ~~500~~ 5,000 kg of soils, water or debris contaminated with non-acute hazardous waste, 500 kg of non-acute hazardous waste, 1 kg of acute hazardous waste and ~~250~~ 2,500 kg of soils, water and debris contaminated with acute hazardous waste, to conduct further treatability study evaluation when:

SECTION 51. NR 605.05(10)(b) and (c) are renumbered NR 605.05(10)(d) and (e).

SECTION 52. NR 605.05(10)(b) and (c) are created to read:

NR 605.05(10)(b) The department may grant requests described in par. (a) in response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies.

Note: Factors the department will consider in reviewing such requests include the nature of the technology; the type of process (e.g., batch versus continuous); the size of the unit undergoing testing, (particularly in relation to scale-up considerations); the time and quantity of material required to reach steady state operating conditions; and test design considerations such as mass balance calculations.

(c) The department may grant requests described in par. (a) in response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies.

SECTION 53. NR 605.05(11)(c) and (d) are amended to read:

NR 605.05(11)(c) No more than a total of ~~250~~ 10,000 kg of "as received" soils, water or debris contaminated with non-acute hazardous waste, 2,500 kg of soils, water or debris contaminated with acute hazardous waste or 250 kg of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.

(d) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed ~~1000~~ 10,000 kg, the total of which may include ~~500~~ 10,000 kg of soils, water or debris contaminated with non-acute hazardous waste, 2,500 kg of soils, water or debris contaminated with acute hazardous waste, 1,000 kg of non-acute hazardous wastes other than contaminated soils, water or debris, or 1 kg of acute

hazardous waste. This quantity limitation does not include: treatment materials, including nonhazardous solid waste, added to "as received" hazardous waste.

SECTION 54. NR 605.05(11)(d)1. and 2. are repealed.

SECTION 55. NR 605.05(11)(e) is amended to read:

NR 605.05(11)(e) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year has elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, or no more than 2 years for treatability studies involving bioremediation, whichever date first occurs. Up to 500 kg of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to 5 years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.

SECTION 56. NR 605.05(12) is created to read:

NR 605.05(12) REQUIREMENTS FOR UNIVERSAL WASTE. Universal wastes are exempt from regulation under chs. NR 600 to 685 except as specified in ch. NR 690 and, therefore are not fully regulated as hazardous waste.

SECTION 57. NR 605.08(2)(a)1. and 3., (3)(a)1. and 2. and (5)(a) are amended to read:

NR 605.08(2)(a)1. It is a liquid, other than an aqueous solution containing less than 24% alcohol by volume, and has a 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-93-85~~ D-93-96, or a Setaflash closed cup tester, using the test method specified in ASTM standard D-3278-82, or as determined by an equivalent test method approved by EPA.

3. It is an ignitable compressed gas as defined in 49 CFR 173.300 October 1, 1990, and as determined by the test methods described in that regulation~~, ASTM standard D-323-82,~~ or equivalent test methods approved by EPA.

(3)(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 ~~either EPA~~ using method ~~9040~~ 9040B in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c).

2. It is a liquid and corrodes ~~plain carbon~~ steel ~~with a carbon content of 0.20%~~ (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 in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c).

~~Note: Publication SW-846 may be obtained from:~~

~~Superintendent of Documents~~
~~U.S. Government Printing Office~~
~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.~~

(5) TOXICITY CHARACTERISTIC. (a) A solid waste exhibits the characteristic of toxicity if, using the toxicity characteristic leaching procedure, ~~EPA~~ test method 1311 in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c), the extract from a representative sample of the waste contains any of the contaminants listed in table I at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5% filterable solids, the waste itself, after filtering using the methodology in method 1311, is considered to be the extract for the purpose of this section.

SECTION 58. NR 605.09(2)(a) Table II Hazardous Waste Number F500 is amended to read:

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|---|---|
| F500 | Waste containing the halogenated compounds tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, ortho-dichlorobenzene, dichlorodifluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane, trichlorofluoromethane, 1,1-dichloroethylene and 1,2-dichloroethylene at greater than 1% (10,000 ppm). This listing includes any combination of the above named halogenated compounds where the total chloride concentration or the sum of the concentrations of the individual compounds exceeds 1% or 10,000 ppm on a weight to weight basis. Halogenated compounds concentration shall be determined using ~~EPA~~ test methods ~~8010A~~ 8010B, ~~8021~~ 8021A, ~~8240A~~ 8240B or ~~8260~~ 8260A for volatile organics in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986 , as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or total chloride analysis of bomb washings from ASTM D ~~240-92~~ 240-92E, "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter" (T) |

SECTION 59. NR 605.09(2)(b) Table III, (3)(b) Table IV and (3)(c) Table V are amended to read:

## NR 605.09(2)(b) Table III
## Hazardous Waste from Specific Sources

| Hazardous Waste Number | Hazardous Waste | Hazardous Code |
|---|---|---|
| Wood Preservation | | |
| K001 | Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote or pentachlorophenol. | (T) |
| Inorganic Pigments | | |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments. | (T) |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. | (T) |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. | (T) |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. | (T) |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments, anhydrous and hydrated. | (T) |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. | (T) |
| K008 | Oven residue from the production of chrome oxide green pigments. | (T) |
| Organic Chemicals | | |
| K009 | Distillation bottoms from the production of acetaldehyde from ethylene. | (T) |
| K010 | Distillation side cuts from the production of acetaldehyde from ethylene. | (T) |
| K011 | Bottom stream from the wastewater stripper in the production of acrylonitrile. | (R, T) |
| K013 | Bottom stream from the acetonitrile column in the production of acrylonitrile. | (R, T) |
| K014 | Bottoms from the acetonitrile purification column in the production of acrylonitrile. | (T) |
| K015 | Still bottoms from the distillation of benzyl chloride. | (T) |
| K016 | Heavy ends or distillation residues from the production of carbon tetrachloride. | (T) |
| K017 | Heavy ends or still bottoms from the purification column in the production of epichlorohydrin. | (T) |
| K018 | Heavy ends from the fractionation column in ethyl chloride production. | (T) |
| K019 | Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production. | (T) |
| K020 | Heavy ends from the distillation of vinyl chloride in vinyl | (T) |

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| | chloride monomer production. | |
| K021 | Aqueous spent antimony catalyst waste from fluoromethanes production. | (T) |
| K022 | Distillation bottom tars from the production of phenol or acetone from cumene. | (T) |
| K023 | Distillation light ends from the production of phthalic anhydride from naphthalene. | (T) |
| K024 | Distillation bottoms from the production of phthalic anhydride from naphthalene. | (T) |
| K093 | Distillation light ends from the production of phthalic anhydride from ortho-xylene. | (T) |
| K094 | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. | (T) |
| K025 | Distillation bottoms from the production of nitrobenzene by the nitration of benzene. | (T) |
| K026 | Stripping still tails from the production of methyl ethyl pyridines. | (T) |
| K027 | Centrifuge and distillation residues from toluene diisocyanate production. | (R, T) |
| K028 | Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. | (T) |
| K029 | Waste from the product stream stripper in the production of 1,1,1-trichloroethane. | (T) |
| K095 | Distillation bottoms from the production of 1,1,1-trichloroethane. | (T) |
| K096 | Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. | (T) |
| K030 | Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene. | (T) |
| K083 | Distillation bottoms from aniline production. | (T) |
| K103 | Process residues from aniline extraction from the production of aniline. | (T) |
| K104 | Combined wastewater streams generated from nitrobenzene/aniline production. | (T) |
| K085 | Distillation or fractionating column bottoms from the production of chlorobenzenes. | (T) |
| K105 | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. | (T) |
| K107 | Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazines. | (C,T) |
| K108 | Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | (I,T) |
| K109 | Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | (T) |
| K110 | Condensed column overheads from intermediate separation from the | (T) |

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| | production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | |
| K111 | Product washwaters from the production of dinitrotoluene via nitration of toluene. | (C, T) |
| K112 | Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene. | (T) |
| K113 | Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | (T) |
| K114 | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | (T) |
| K115 | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | (T) |
| K116 | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. | (T) |
| K117 | Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. | (T) |
| K118 | Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | (T) |
| K136 | Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | (T) |
| K149 | Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides and compounds with mixtures of these functional groups. This waste does not include still bottoms from the distillation of benzyl chloride. | (T) |
| K150 | Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides and compounds with mixtures of these functional groups. | (T) |
| K151 | Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides and compounds with mixtures of these functional groups. | (T) |
| K156 | Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. | (T) |
| K157 | Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. | (T) |
| K158 | Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. | (T) |
| K159 | Organics from the treatment of thiocarbamate wastes. | (T) |
| K160 | Solids (including filter wastes, separation solids, and spent catalysts) from the production of thiocarbamates and solids from the treatment of thiocarbamate wastes. | (T) |
| K161 | Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126.) | (R,T) |

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| Pesticides | | |
| K031 | By-product salts generated in the production of MSMA and cacodylic acid. | (T) |
| K032 | Wastewater treatment sludge from the production of chlordane. | (T) |
| K033 | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. | (T) |
| K034 | Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. | (T) |
| K097 | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. | (T) |
| K035 | Wastewater treatment sludges generated in the production of creosote. | (T) |
| K036 | Still bottoms from toluene reclamation distillation in the production of disulfoton. | (T) |
| K037 | Wastewater treatment sludges from the production of disulfoton. | (T) |
| K038 | Wastewater from the washing and stripping of phorate production. | (T) |
| K039 | Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate. | (T) |
| K040 | Wastewater treatment sludge from the production of phorate. | (T) |
| K041 | Wastewater treatment sludge from the production of toxaphene. | (T) |
| K098 | Untreated process wastewater from the production of toxaphene. | (T) |
| K042 | Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T. | (T) |
| K043 | 2,6-Dichlorophenol waste from the production of 2,4-D. | (T) |
| K099 | Untreated wastewater from the production of 2,4-D. | (T) |
| K123 | Process wastewater, including supernates, filtrates and washwaters, from the production of ethylenebisdithiocarbamic acid and its salt. | (T) |
| K124 | Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. | (C, T) |
| K125 | Filtration, evaporation and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts. | (T) |
| K126 | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts. | (T) |
| K131 | Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide. | (C,T) |
| K132 | Spent absorbent and wastewater separator solids from the production of methyl bromide. | (T) |
| Explosives | | |
| K044 | Wastewater treatment sludges from the manufacturing and processing of explosives. | (R) |
| K045 | Spent carbon from the treatment of wastewater containing explosives. | (R) |
| K046 | Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds. | (T) |

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| K047 | Pink or red water from TNT operations. | (R) |
| Petroleum Refining | | |
| K048 | Dissolved air flotation (DAF) float from the petroleum refining industry. | (T) |
| K049 | Slop oil emulsion solids from the petroleum refining industry. | (T) |
| K050 | Heat exchanger bundle cleaning sludge from the petroleum refining industry. | (T) |
| K051 | American Petroleum Institute (API) separator sludge from the petroleum refining industry. | (T) |
| K052 | Tank bottoms, leaded, from the petroleum refining industry. | (T) |
| Iron and Steel | | |
| K061 | Emission control dust or sludge from the electric furnace primary production of steel. | (T) |
| K062 | Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry identified by the SIC codes 331 and 332. | (C,T) |
| Primary Copper | | |
| K064 | Acid plant blowdown slurry or sludge resulting from the thickening of blowdown slurry from primary copper production. | (T) |
| Primary Lead | | |
| K065 | Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities. | (T) |
| Primary Zinc | | |
| K066 | Sludge from treatment of process wastewater or acid plant blowdown from primary zinc production. | (T) |
| Primary Aluminum | | |
| K088 | Spent potliners from primary aluminum reduction. | (T) |
| Ferroalloys | | |
| K090 | Emission control dust or sludge from ferrochromiumsilicon production. | (T) |
| K091 | Emission control dust or sludge from ferrochromium production. | (T) |
| Secondary Lead | | |
| K069 | Emission control dust or sludge from secondary lead smelting. This listing does not include sludge generated from secondary acid scrubber systems. | (T) |
| K100 | Waste leaching solution from acid leaching of emission control dust or sludge from secondary lead smelting. | (T) |
| Inorganic Chemicals | | |
| K071 | Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used. | (T) |
| K073 | Chlorinated hydrocarbon wastes from the purification step of the diaphragm cell process using graphite anodes in chlorine production. | (T) |
| K106 | Wastewater treatment sludge from the mercury cell process in chlorine production. | (T) |
| Ink Formulation | | |
| K086 | Solvent washes and sludges, caustic washes and sludges, or water | (T) |

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| | washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps and stabilizers containing chromium and lead. | |
| Veterinary Pharmaceuticals | | |
| K084 | Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | (T) |
| K101 | Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | (T) |
| K102 | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | (T) |
| Coking | | |
| K060 | Ammonia still lime sludge from coking operations. | (T) |
| K087 | Decanter tank tar sludge from coking operations. | (T) |
| K141 | Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations). | (T) |
| K142 | Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal. | (T) |
| K143 | Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters and wash oil recovery units from the recovery of coke by-products produced from coal. | (T) |
| K144 | Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal. | (T) |
| K145 | Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal. | (T) |
| K147 | Tar storage tank residues from coal tar refining. | (T) |
| K148 | Residues from coal tar distillation, including but not limited to, still bottoms. | (T) |

Note: The Standard Industrial Classification Manual may be obtained from:

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# NR 605.09(3)(b) Table IV
## Acute Hazardous Commercial Chemical Products and Manufacturing Chemical Intermediates

| Hazardous waste No. | Chemical abstracts No. | Substance |
|---|---|---|
| P023 | 00107-20-0 | Acetaldehyde, chloro- |
| P002 | 00591-08-2 | Acetamide, N-(aminothioxomethyl)- |
| P057 | 00640-19-7 | Acetamide, 2-fluoro- |
| P058 | 00062-74-8 | Acetic acid, fluoro-, sodium salt |
| P002 | 00591-08-2 | 1-Acetyl-2-thiourea |
| P003 | 00107-02-8 | Acrolein |
| P070 | 00116-06-3 | Aldicarb |
| P023 | 1646-88-4 | Aldicarb sulfone |
| P004 | 00309-00-2 | Aldrin |
| P005 | 00107-18-6 | Allyl alcohol |
| P006 | 20859-73-8 | Aluminum phosphide (R,T) |
| P007 | 02763-96-4 | 5-(Aminomethyl)-3-isoxazolol |
| P008 | 00504-24-5 | 4-Aminopyridine |
| P009 | 00131-74-8 | Ammonium picrate (R) |
| P119 | 07803-55-6 | Ammonium vanadate |
| P099 | 00506-61-6 | Argentate(1-), bis(cyano-C)-, potassium |
| P010 | 07778-39-4 | Arsenic acid $H_3AsO_4$ |
| P012 | 01327-53-3 | Arsenic oxide $As_2O_3$ |
| P011 | 01303-28-2 | Arsenic oxide $As_2O_5$ |
| P011 | 01303-28-2 | Arsenic pentoxide |
| P012 | 01327-53-3 | Arsenic trioxide |
| P038 | 00692-42-2 | Arsine, diethyl- |
| P036 | 00696-28-6 | Arsonous dichloride, phenyl- |
| P054 | 00151-56-4 | Aziridine |
| P067 | 00075-55-8 | Aziridine, 2-methyl- |
| P013 | 00542-62-1 | Barium cyanide |
| P024 | 00106-47-8 | Benzenamine, 4-chloro- |
| P077 | 00100-01-6 | Benzenamine, 4-nitro- |
| P028 | 00100-44-7 | Benzene, (chloromethyl)- |
| P042 | 00051-43-4 | 1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)- |
| P046 | 00122-09-8 | Benzeneethanamine, alpha,alpha-dimethyl- |
| P014 | 00108-98-5 | Benzenethiol |
| P127 | 1563-66-2 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate |
| P188 | 57-64-7 | Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1) |
| P001 | [1] 00081-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3% |
| P028 | 00100-44-7 | Benzyl chloride |
| P015 | 07440-41-7 | Beryllium powder |
| P017 | 00598-31-2 | Bromoacetone |
| P018 | 00357-57-3 | Brucine |
| P045 | 39196-18-4 | 2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino)carbonyl] oxime |
| P021 | 00592-01-8 | Calcium cyanide |
| P021 | 00592-01-8 | Calcium cyanide $Ca(CN)_2$ |
| P189 | 55285-14-8 | Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester |
| P191 | 644-64-4 | Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]- 5-methyl-1H-pyrazol-3-yl ester |
| P192 | 119-38-0 | Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H- pyrazol-5-yl ester |
| P190 | 1129-41-5 | Carbamic acid, methyl-, 3-methylphenyl ester |
| P127 | 1563-66-2 | Carbofuran |
| P022 | 00075-15-0 | Carbon disulfide |
| P095 | 00075-44-5 | Carbonic dichloride |
| P189 | 55285-14-8 | Carbosulfan |
| P023 | 00107-20-0 | Chloroacetaldehyde |
| P024 | 00106-47-8 | p-Chloroaniline |
| P026 | 05344-82-1 | 1-(o-Chlorophenyl)thiourea |
| P027 | 00542-76-7 | 3-Chloropropionitrile |
| P029 | 00544-92-3 | Copper cyanide |
| P029 | 00544-92-3 | Copper cyanide Cu(CN) |
| P202 | 64-00-6 | m-Cumenyl methylcarbamate |
| P030 | | Cyanides (soluble cyanide salts), not otherwise specified |
| P031 | 00460-19-5 | Cyanogen |
| P033 | 00506-77-4 | Cyanogen chloride |
| P033 | 00506-77-4 | Cyanogen chloride (CN)Cl |
| P034 | 00131-89-5 | 2-Cyclohexyl-4,6-dinitrophenol |
| P016 | 00542-88-1 | Dichloromethyl ether |

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| P036 | 00696-28-6 | Dichlorophenylarsine |
| P037 | 00060-57-1 | Dieldrin |
| P038 | 00692-42-2 | Diethylarsine |
| P041 | 00311-45-5 | Diethyl-p-nitrophenyl phosphate |
| P040 | 00297-97-2 | O,O-Diethyl O-pyrazinyl phosphorothioate |
| P043 | 00055-91-4 | Diisopropylfluorophosphate (DFP) |
| P004 | 00309-00-2 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- |
| P060 | 00465-73-6 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)- |
| P037 | 00060-57-1 | 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)- |
| P051 | [1] 00072-20-8 | 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)-, & metabolites |
| P044 | 00060-51-5 | Dimethoate |
| P046 | 00122-09-8 | alpha,alpha-Dimethylphenethylamine |
| P191 | 644-64-4 | Dimetilan |
| P047 | [1] 00534-52-1 | 4,6-Dinitro-o-cresol, & salts |
| P048 | 00051-28-5 | 2,4-Dinitrophenol |
| P020 | 00088-85-7 | Dinoseb |
| P085 | 00152-16-9 | Diphosphoramide, octamethyl- |
| P111 | 00107-49-3 | Diphosphoric acid, tetraethyl ester |
| P039 | 00298-04-4 | Disulfoton |
| P049 | 00541-53-7 | Dithiobiuret |
| P185 | 26419-73-8 | 1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O- [(methylamino)-carbonyl]oxime |
| P050 | 00115-29-7 | Endosulfan |
| P088 | 00145-73-3 | Endothall |
| P051 | 00072-20-8 | Endrin |
| P051 | 00072-20-8 | Endrin, & metabolites |
| P042 | 00051-43-4 | Epinephrine |
| P031 | 00460-19-5 | Ethanedinitrile |
| P066 | 16752-77-5 | Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester |
| P194 | 23135-22-0 | Ethanimidothioc acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester |
| P101 | 00107-12-0 | Ethyl cyanide |
| P054 | 00151-56-4 | Ethyleneimine |
| P097 | 00052-85-7 | Famphur |
| P056 | 07782-41-4 | Fluorine |
| P057 | 00640-19-7 | Fluoroacetamide |
| P058 | 00062-74-8 | Fluoroacetic acid, sodium salt |
| P198 | 23422-53-9 | Formetanate hydrochloride |
| P197 | 17702-57-7 | Formparanate |
| P065 | 00628-86-4 | Fulminic acid, mercury(2+) salt (R,T) |
| P059 | 00076-44-8 | Heptachlor |
| P062 | 00757-58-4 | Hexaethyl tetraphosphate |
| P116 | 00079-19-6 | Hydrazinecarbothioamide |
| P068 | 00060-34-4 | Hydrazine, methyl- |
| P063 | 00074-90-8 | Hydrocyanic acid |
| P063 | 00074-90-8 | Hydrogen cyanide |
| P096 | 07803-51-2 | Hydrogen phosphide |
| P060 | 00465-73-6 | Isodrin |
| P192 | 119-38-0 | Isolan |
| P202 | 64-00-6 | 3-Isopropylphenyl N-methylcarbamate |
| P007 | 02763-96-4 | 3(2H)-Isoxazolone, 5-(aminomethyl)- |
| P196 | 15339-36-3 | Manganese, bis(dimethylcarbamodithioato-S,S')-, |
| P196 | 15339-36-3 | Manganese dimethyldithiocarbamate |
| P092 | 00062-38-4 | Mercury, (acetato-O)phenyl- |
| P065 | 00628-86-4 | Mercury fulminate (R,T) |
| P082 | 00062-75-9 | Methanamine, N-methyl-N-nitroso- |
| P064 | 00624-83-9 | Methane, isocyanato- |
| P016 | 00542-88-1 | Methane, oxybis[chloro- |
| P112 | 00509-14-8 | Methane, tetranitro- (R) |
| P118 | 00075-70-7 | Methanethiol, trichloro- |
| P198 | 23422-53-9 | Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride |
| P197 | 17702-57-7 | Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]- |
| P050 | 00115-29-7 | 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide |
| P059 | 00076-44-8 | 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro- |
| P128 | 315-13-4 | Methiocarb |
| P066 | 16752-77-5 | Methomyl |

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|---|---|---|
| P068 | 00060-34-4 | Methyl hydrazine |
| P064 | 00624-83-9 | Methyl isocyanate |
| P069 | 00075-86-5 | 2-Methyllactonitrile |
| P071 | 00298-00-0 | Methyl parathion |
| P190 | 1129-41-5 | Metolcarb |
| P128 | 315-18-4 | Mexacarbate |
| P072 | 00086-88-4 | alpha-Naphthylthiourea |
| P073 | 13463-39-3 | Nickel carbonyl |
| P073 | 13463-39-3 | Nickel carbonyl $Ni(CO)_4$, (T-4)- |
| P074 | 00557-19-7 | Nickel cyanide |
| P074 | 00557-19-7 | Nickel cynaide $Ni(CN)_2$ |
| P075 | [1] 00054-11-5 | Nicotine, & salts |
| P076 | 10102-43-9 | Nitric oxide |
| P077 | 00100-01-6 | p-Nitroaniline |
| P078 | 10102-44-0 | Nitrogen dioxide |
| P076 | 10102-43-9 | Nitrogen oxide NO |
| P078 | 10102-44-0 | Nitrogen oxide $NO_2$ |
| P081 | 00055-63-0 | Nitroglycerine (R) |
| P082 | 00062-75-9 | N-Nitrosodimethylamine |
| P084 | 04549-40-0 | N-Nitrosomethylvinylamine |
| P085 | 00152-16-9 | Octamethylpyrophosphoramide |
| P087 | 20816-12-0 | Osmium oxide $OsO_4$, (T-4)- |
| P087 | 20816-12-0 | Osmium tetroxide |
| P088 | 00145-73-3 | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid |
| P194 | 23135-22-0 | Oxamyl |
| P089 | 00056-38-2 | Parathion |
| P034 | 00131-89-5 | Phenol, 2-cyclohexyl-4,6-dinitro- |
| P128 | 315-18-4 | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) |
| P199 | 2032-65-7 | Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate |
| P048 | 00051-28-5 | Phenol, 2,4-dinitro- |
| P047 | [1] 00534-52-1 | Phenol, 2-methyl-4,6-dinitro-, & salts |
| P202 | 64-00-6 | Phenol, 3-(1-methylethyl)-, methyl carbamate |
| P201 | 2631-37-0 | Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate |
| P020 | 00088-85-7 | Phenol, 2-(1-methylpropyl)-4,6-dinitro- |
| P009 | 00131-74-8 | Phenol, 2,4,6-trinitro-, ammonium salt (R) |
| P092 | 00062-38-4 | Phenylmercury acetate |
| P093 | 00103-85-5 | Phenylthiourea |
| P094 | 00298-02-2 | Phorate |
| P095 | 00075-44-5 | Phosgene |
| P096 | 07803-51-2 | Phosphine |
| P041 | 00311-45-5 | Phosphoric acid, diethyl 4-nitrophenyl ester |
| P039 | 00298-04-4 | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester |
| P094 | 00298-02-2 | Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester |
| P044 | 00060-51-5 | Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester |
| P043 | 00055-91-4 | Phosphorofluoridic acid, bis(1-methylethyl) ester |
| P089 | 00056-38-2 | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester |
| P040 | 00297-97-2 | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester |
| P097 | 00052-85-7 | Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester |
| P071 | 00298-00-0 | Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester |
| P204 | 57-47-6 | Physostigmine |
| P188 | 57-64-7 | Physostigmine salicylate |
| P110 | 00078-00-2 | Plumbane, tetraethyl- |
| P098 | 00151-50-8 | Potassium cyanide |
| P098 | 00151-50-8 | Potassium cyanide K(CN) |
| P099 | 00506-61-6 | Potassium silver cyanide |
| P201 | 2631-37-0 | Promecarb |
| P203 | 1646-88-4 | Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime |
| P070 | 00116-06-3 | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime |
| P101 | 00107-12-0 | Propanenitrile |
| P027 | 00542-76-7 | Propanenitrile, 3-chloro- |
| P069 | 00075-86-5 | Propanenitrile, 2-hydroxy-2-methyl- |
| P081 | 00055-63-0 | 1,2,3-Propanetriol, trinitrate (R) |
| P017 | 00598-31-2 | 2-Propanone, 1-bromo- |
| P102 | 00107-19-7 | Propargyl alcohol |
| P003 | 00107-02-8 | 2-Propenal |
| P005 | 00107-18-6 | 2-Propen-1-ol |
| P067 | 00075-55-8 | 1,2-Propylenimine |
| P102 | 00107-19-7 | 2-Propyn-1-ol |
| P008 | 00504-24-5 | 4-Pyridinamine |
| P075 | [1] 00054-11-5 | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts |
| P204 | 57-47-6 | Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)- |
| P114 | 12039-52-0 | Selenious acid, dithallium(1+) salt |

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|---|---|---|
| P103 | 00630-10-4 | Selenourea |
| P104 | 00506-64-9 | Silver cyanide |
| P104 | 00506-64-9 | Silver cyanide Ag(CN) |
| P105 | 26628-22-8 | Sodium azide |
| P106 | 00143-33-9 | Sodium cyanide |
| P106 | 00143-33-9 | Sodium cyanide Na(CN) |
| P108 | [1] 00057-24-9 | Strychnidin-10-one, & salts |
| P018 | 00357-57-3 | Strychnidin-10-one, 2,3-dimethoxy- |
| P108 | [1] 00057-24-9 | Strychnine, & salts |
| P115 | 07446-18-6 | Sulfuric acid, dithallium(1+) salt |
| P109 | 03689-24-5 | Tetraethyldithiopyrophosphate |
| P110 | 00078-00-2 | Tetraethyl lead |
| P111 | 00107-49-3 | Tetraethyl pyrophosphate |
| P112 | 00509-14-8 | Tetranitromethane (R) |
| P062 | 00757-58-4 | Tetraphosphoric acid, hexaethyl ester |
| P113 | 01314-32-5 | Thallic oxide |
| P113 | 01314-32-5 | Thallium oxide $Tl_2O_3$ |
| P114 | 12039-52-0 | Thallium(I) selenite |
| P115 | 07446-18-6 | Thallium(I) sulfate |
| P109 | 03689-24-5 | Thiodiphosphoric acid, tetraethyl ester |
| P045 | 39196-18-4 | Thiofanox |
| P049 | 00541-53-7 | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ |
| P014 | 00108-98-5 | Thiophenol |
| P116 | 00079-19-6 | Thiosemicarbazide |
| P026 | 05344-82-1 | Thiourea, (2-chlorophenyl)- |
| P072 | 00086-88-4 | Thiourea, 1-naphthalenyl- |
| P093 | 00103-85-5 | Thiourea, phenyl- |
| P185 | 26419-73-8 | Tirpate |
| P123 | 08001-35-2 | Toxaphene |
| P118 | 00075-70-7 | Trichloromethanethiol |
| P119 | 07803-55-6 | Vanadic acid, ammonium salt |
| P120 | 01314-62-1 | Vanadium oxide $V_2O_5$ |
| P120 | 01314-62-1 | Vanadium pentoxide |
| P084 | 04549-40-0 | Vinylamine, N-methyl-N-nitroso- |
| P001 | [1] 00081-81-2 | Warfarin, & salts, when present at concentrations greater than 0.3% |
| P205 | 137-30-4 | Zinc, bis(dimethylcarbamodithioato-S,S')-, |
| P121 | 00557-21-1 | Zinc cyanide |
| P121 | 00557-21-1 | Zinc cyanide $Zn(CN)_2$ |
| P122 | 01314-84-7 | Zinc phosphide $Zn_3P_2$ when present at concentrations greater than 10% (R,T) |
| P205 | 137-30-4 | Ziram |

[1] CAS Number given for parent compound only.

## NR 605.09(3)(c) Table V
## Toxic Commercial Chemical Products and Manufacturing Chemical Intermediates

| Hazardous waste No. | Chemical abstracts No. | Substance |
|---|---|---|
| U394 | 30558-43-1 | A2213 |
| U001 | 00075-07-0 | Acetaldehyde (I) |
| U034 | 00075-87-6 | Acetaldehyde, trichloro- |
| U187 | 00062-44-2 | Acetamide, N-(4-ethoxyphenyl)- |
| U005 | 00053-96-3 | Acetamide, N-9H-fluoren-2-yl- |
| U240 | [1] 00094-75-7 | Acetic acid, (2,4-dichlorophenoxy)-, salts & esters |
| U112 | 00141-78-6 | Acetic acid ethyl ester (I) |
| U144 | 00301-04-2 | Acetic acid, lead(2+) salt |
| U214 | 00563-68-8 | Acetic acid, thallium(1+) salt |
| See F027 | 00093-76-5 | Acetic acid, (2,4,5-trichlorophenoxy)- |
| U002 | 00067-64-1 | Acetone (I) |
| U003 | 00075-05-8 | Acetonitrile (I,T) |
| U004 | 00098-86-2 | Acetophenone |
| U005 | 00053-96-3 | 2-Acetylaminofluorene |
| U006 | 00075-36-5 | Acetyl chloride (C,R,T) |
| U007 | 00079-06-1 | Acrylamide |
| U008 | 00079-10-7 | Acrylic acid (I) |
| U009 | 00107-13-1 | Acrylonitrile |
| U011 | 00061-82-5 | Amitrole |
| U012 | 00062-53-3 | Aniline (I,T) |
| U136 | 00075-60-5 | Arsinic acid, dimethyl- |
| U014 | 00492-80-8 | Auramine |

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|---|---|---|
| U015 | 00115-02-6 | Azaserine |
| U365 | 2212-67-1 | H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester |
| U010 | 00050-07-7 | Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpha,8balpha)]- |
| U280 | 101-27-9 | Barban |
| U278 | 22781-23-3 | Bendiocarb |
| U364 | 22961-82-6 | Bendiocarb phenol |
| U271 | 17804-35-2 | Benomyl |
| U157 | 00056-49-5 | Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- |
| U016 | 00225-51-4 | Benz[c]acridine |
| U017 | 00098-87-3 | Benzal chloride |
| U192 | 23950-58-5 | Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)- |
| U018 | 00056-55-3 | Benz[a]anthracene |
| U094 | 00057-97-6 | Benz[a]anthracene, 7,12-dimethyl- |
| U012 | 00062-53-3 | Benzenamine (I,T) |
| U014 | 00492-80-8 | Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl- |
| U049 | 03165-93-3 | Benzenamine, 4-chloro-2-methyl-, hydrochloride |
| U093 | 00060-11-7 | Benzenamine, N,N-dimethyl-4-(phenylazo)- |
| U328 | 00095-53-4 | Benzenamine, 2-methyl- |
| U353 | 00106-49-0 | Benzenamine, 4-methyl- |
| U158 | 00101-14-4 | Benzenamine, 4,4'-methylenebis[2-chloro- |
| U222 | 00636-21-5 | Benzenamine, 2-methyl-, hydrochloride |
| U181 | 00099-55-8 | Benzenamine, 2-methyl-5-nitro- |
| U019 | 00071-43-2 | Benzene (I,T) |
| U038 | 00510-15-6 | Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester |
| U030 | 00101-55-3 | Benzene, 1-bromo-4-phenoxy- |
| U035 | 00305-03-3 | Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]- |
| U037 | 00108-90-7 | Benzene, chloro- |
| U221 | 25376-45-8 | Benzenediamine, ar-methyl- |
| U028 | 00117-81-7 | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester |
| U069 | 00084-74-2 | 1,2-Benzenedicarboxylic acid, dibutyl ester |
| U088 | 00084-66-2 | 1,2-Benzenedicarboxylic acid, diethyl ester |
| U102 | 00131-11-3 | 1,2-Benzenedicarboxylic acid, dimethyl ester |
| U107 | 00117-84-0 | 1,2-Benzenedicarboxylic acid, dioctyl ester |
| U070 | 00095-50-1 | Benzene, 1,2-dichloro- |
| U071 | 00541-73-1 | Benzene, 1,3-dichloro- |
| U072 | 00106-46-7 | Benzene, 1,4-dichloro- |
| U060 | 00072-54-8 | Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro- |
| U017 | 00098-87-3 | Benzene, (dichloromethyl)- |
| U223 | 26471-62-5 | Benzene, 1,3-diisocyanatomethyl- (R,T) |
| U239 | 01330-20-7 | Benzene, dimethyl- (I,T) |
| U201 | 00108-46-3 | 1,3-Benzenediol |
| U127 | 00118-74-1 | Benzene, hexachloro- |
| U056 | 00110-82-7 | Benzene, hexahydro- (I) |
| U220 | 00108-88-3 | Benzene, methyl- |
| U105 | 00121-14-2 | Benzene, 1-methyl-2,4-dinitro- |
| U106 | 00606-20-2 | Benzene, 2-methyl-1,3-dinitro- |
| U055 | 00098-82-8 | Benzene, (1-methylethyl)- (I) |
| U169 | 00098-95-3 | Benzene, nitro- |
| U183 | 00608-93-5 | Benzene, pentachloro- |
| U185 | 00082-68-8 | Benzene, pentachloronitro- |
| U020 | 00098-09-9 | Benzenesulfonic acid chloride (C,R) |
| U020 | 00098-09-9 | Benzenesulfonyl chloride (C,R) |
| U207 | 00095-94-3 | Benzene, 1,2,4,5-tetrachloro- |
| U061 | 00050-29-3 | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro- |
| U247 | 00072-43-5 | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy- |
| U023 | 00098-07-7 | Benzene, (trichloromethyl)- |
| U234 | 00099-35-4 | Benzene, 1,3,5-trinitro- |
| U021 | 00092-87-5 | Benzidine |
| U202 | [1] 00081-07-2 | 1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts |
| U278 | 22781-23-3 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate |
| U364 | 22961-82-6 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, |
| U203 | 00094-59-7 | 1,3-Benzodioxole, 5-(2-propenyl)- |
| U141 | 00120-58-1 | 1,3-Benzodioxole, 5-(1-propenyl)- |
| U090 | 00094-58-6 | 1,3-Benzodioxole, 5-propyl- |
| U367 | 1563-38-8 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- |
| U064 | 00189-55-9 | Benzo[rst]pentaphene |
| U248 | [1] 00081-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less |
| U022 | 00050-32-8 | Benzo[a]pyrene |
| U197 | 00106-51-4 | p-Benzoquinone |
| U023 | 00098-07-7 | Benzotrichloride (C,R,T) |
| U085 | 01464-53-5 | 2,2'-Bioxirane |

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|---|---|---|
| U021 | 00092-87-5 | [1,1'-Biphenyl]-4,4'-diamine |
| U073 | 00091-94-1 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- |
| U091 | 00119-90-4 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- |
| U095 | 00119-93-7 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl- |
| U401 | 97-74-5 | Bis(dimethylthiocarbamoyl) sulfide |
| U400 | 120-54-7 | Bis(pentamethylene)thiuram tetrasulfide |
| U225 | 00075-25-2 | Bromoform |
| U030 | 00101-55-3 | 4-Bromophenyl phenyl ether |
| U128 | 00087-68-3 | 1,3-Butadiene, 1,1,2,3,4,4-hexachloro- |
| U172 | 00924-16-3 | 1-Butanamine, N-butyl-N-nitroso- |
| U031 | 00071-36-3 | 1-Butanol (I) |
| U159 | 00078-93-3 | 2-Butanone (I,T) |
| U160 | 01338-23-4 | 2-Butanone, peroxide (R,T) |
| U053 | 04170-30-3 | 2-Butenal |
| U074 | 00764-41-0 | 2-Butene, 1,4-dichloro- (I,T) |
| U143 | 00303-34-4 | 2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]- |
| U031 | 00071-36-3 | n-Butyl alcohol (I) |
| U392 | 2008-41-5 | Butylate |
| U136 | 00075-60-5 | Cacodylic acid |
| U032 | 13765-19-0 | Calcium chromate |
| U372 | 10605-21-7 | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester |
| U271 | 17804-35-2 | Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester |
| U375 | 55406-53-6 | Carbamic acid, butyl-, 3-iodo-2-propynyl ester |
| U280 | 101-27-9 | Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester |
| U238 | 00051-79-6 | Carbamic acid, ethyl ester |
| U178 | 00615-53-2 | Carbamic acid, methylnitroso-, ethyl ester |
| U373 | 122-42-9 | Carbamic acid, phenyl-, 1-methylethyl ester |
| U409 | 23564-05-8 | Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester |
| U097 | 00079-44-7 | Carbamic chloride, dimethyl- |
| U379 | 136-30-1 | Carbamodithioic acid, dibutyl, sodium salt |
| U277 | 95-06-7 | Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester. |
| U381 | 148-18-5 | Carbamodithioic acid, diethyl-, sodium salt. |
| U383 | 128-03-0 | Carbamodithioic acid, dimethyl, potassium salt. |
| U382 | 128-04-1 | Carbamodithioic acid, dimethyl-, sodium salt. |
| U376 | 144-34-3 | Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid |
| U114 | [1] 00111-54-6 | Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters |
| U378 | 51026-28-9 | Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt |
| U384 | 137-42-8 | Carbamodithioic acid, methyl-, monosodium salt |
| U377 | 137-41-7 | Carbamodithioic acid, methyl,- monopotassium salt |
| U062 | 02303-16-4 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester |
| U389 | 2303-17-5 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester |
| U392 | 2008-41-5 | Carbamothioic acid, bis(2-methylpropyl)-, S-ethyl ester |
| U391 | 1114-71-2 | Carbamothioic acid, butylethyl-, S-propyl ester |
| U386 | 1134-23-2 | Carbamothioic acid, cyclohexylethyl-, S-ethyl ester |
| U390 | 759-94-4 | Carbamothioic acid, dipropyl-, S-ethyl ester |
| U387 | 52888-80-9 | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester |
| U385 | 1929-77-7 | Carbamothioic acid, dipropyl-, S-propyl ester |
| U279 | 63-25-2 | Carbaryl |
| U372 | 10605-21-7 | Carbendazim |
| U367 | 1563-38-8 | Carbofuran phenol |
| U215 | 06533-73-9 | Carbonic acid, dithallium(1+) salt |
| U033 | 00353-50-4 | Carbonic difluoride |
| U156 | 00079-22-1 | Carbonochloridic acid, methyl ester (I,T) |
| U033 | 00353-50-4 | Carbon oxyfluoride (R,T) |
| U211 | 00056-23-5 | Carbon tetrachloride |
| U034 | 00075-87-6 | Chloral |
| U035 | 00305-03-3 | Chlorambucil |
| U036 | 00057-74-9 | Chlordane, alpha & gamma isomers |
| U026 | 00494-03-1 | Chlornaphazin |
| U037 | 00108-90-7 | Chlorobenzene |
| U038 | 00510-15-6 | Chlorobenzilate |
| U039 | 00059-50-7 | p-Chloro-m-cresol |
| U042 | 00110-75-8 | 2-Chloroethyl vinyl ether |
| U044 | 00067-66-3 | Chloroform |
| U046 | 00107-30-2 | Chloromethyl methyl ether |
| U047 | 00091-58-7 | beta-Chloronaphthalene |
| U048 | 00095-57-8 | o-Chlorophenol |
| U049 | 03165-93-3 | 4-Chloro-o-toluidine, hydrochloride |
| U032 | 13765-19-0 | Chromic acid $H_2CrO_4$, calcium salt |

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|---|---|---|
| U050 | 00218-01-9 | Chrysene |
| U393 | 137-29-1 | Copper, bis(dimethylcarbamodithioato-S,S')-, |
| U393 | 137-29-1 | Copper dimethyldithiocarbamate |
| U051 | | Creosote |
| U052 | 01319-77-3 | Cresol (Cresylic acid) |
| U053 | 04170-30-3 | Crotonaldehyde |
| U055 | 00098-82-8 | Cumene (I) |
| U246 | 00506-68-3 | Cyanogen bromide (CN)Br |
| U386 | 1134-23-2 | Cycloate |
| U197 | 00106-51-4 | 2,5-Cyclohexadiene-1,4-dione |
| U056 | 00110-82-7 | Cyclohexane (I) |
| U129 | 00058-89-9 | Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- |
| U057 | 00108-94-1 | Cyclohexanone (I) |
| U130 | 00077-47-4 | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- |
| U058 | 00050-18-0 | Cyclophosphamide |
| U240 | [1] 00094-75-7 | 2,4-D, salts & esters |
| U059 | 20830-81-3 | Daunomycin |
| U366 | 533-74-4 | Dazomet |
| U060 | 00072-54-8 | DDD |
| U061 | 00050-29-3 | DDT |
| U062 | 02303-16-4 | Diallate |
| U063 | 00053-70-3 | Dibenz[a,h]anthracene |
| U064 | 00189-55-9 | Dibenzo[a,i]pyrene |
| U066 | 00096-12-8 | 1,2-Dibromo-3-chloropropane |
| U069 | 00084-74-2 | Dibutyl phthalate |
| U070 | 00095-50-1 | o-Dichlorobenzene |
| U071 | 00541-73-1 | m-Dichlorobenzene |
| U072 | 00106-46-7 | p-Dichlorobenzene |
| U073 | 00091-94-1 | 3,3'-Dichlorobenzidine |
| U074 | 00764-41-0 | 1,4-Dichloro-2-butene (I,T) |
| U075 | 00075-71-8 | Dichlorodifluoromethane |
| U078 | 00075-35-4 | 1,1-Dichloroethylene |
| U079 | 00156-60-5 | 1,2-Dichloroethylene |
| U025 | 00111-44-4 | Dichloroethyl ether |
| U027 | 00108-60-1 | Dichloroisopropyl ether |
| U024 | 00111-91-1 | Dichloromethoxy ethane |
| U081 | 00120-83-2 | 2,4-Dichlorophenol |
| U082 | 00087-65-0 | 2,6-Dichlorophenol |
| U084 | 00542-75-6 | 1,3-Dichloropropene |
| U085 | 01464-53-5 | 1,2:3,4-Diepoxybutane (I,T) |
| U395 | 5952-26-1 | Diethylene glycol, dicarbamate |
| U108 | 00123-91-1 | 1,4-Diethyleneoxide |
| U028 | 00117-81-7 | Diethylhexyl phthalate |
| U086 | 01615-80-1 | N,N'-Diethylhydrazine |
| U087 | 03288-58-2 | O,O-Diethyl S-methyl dithiophosphate |
| U088 | 00084-66-2 | Diethyl phthalate |
| U089 | 00056-53-1 | Diethylstilbesterol |
| U090 | 00094-58-6 | Dihydrosafrole |
| U091 | 00119-90-4 | 3,3'-Dimethoxybenzidine |
| U092 | 00124-40-3 | Dimethylamine (I) |
| U093 | 00060-11-7 | p-Dimethylaminoazobenzene |
| U094 | 00057-97-6 | 7,12-Dimethylbenz[a]anthracene |
| U095 | 00119-93-7 | 3,3'-Dimethylbenzidine |
| U096 | 00080-15-9 | alpha,alpha-Dimethylbenzylhydroperoxide (R) |
| U097 | 00079-44-7 | Dimethylcarbamoyl chloride |
| U098 | 00057-14-7 | 1,1-Dimethylhydrazine |
| U099 | 00540-73-8 | 1,2-Dimethylhydrazine |
| U101 | 00105-67-9 | 2,4-Dimethylphenol |
| U102 | 00131-11-3 | Dimethyl phthalate |
| U103 | 00077-78-1 | Dimethyl sulfate |
| U105 | 00121-14-2 | 2,4-Dinitrotoluene |
| U106 | 00606-20-2 | 2,6-Dinitrotoluene |
| U107 | 00117-84-0 | Di-n-octyl phthalate |
| U108 | 00123-91-1 | 1,4-Dioxane |
| U109 | 00122-66-7 | 1,2-Diphenylhydrazine |
| U110 | 00142-84-7 | Dipropylamine (I) |
| U111 | 00621-64-7 | Di-n-propylnitrosamine |
| U403 | 97-77-8 | Disulfiram |
| U041 | 00106-89-8 | Epichlorohydrin |
| U390 | 759-94-4 | EPTC |
| U001 | 00075-07-0 | Ethanal (I) |
| U404 | 121-44-8 | Ethanamine, N,N-diethyl- |
| U174 | 00055-18-5 | Ethanamine, N-ethyl-N-nitroso- |

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|---|---|---|
| U155 | 00091-80-5 | 1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- |
| U067 | 00106-93-4 | Ethane, 1,2-dibromo- |
| U076 | 00075-34-3 | Ethane, 1,1-dichloro- |
| U077 | 00107-06-2 | Ethane, 1,2-dichloro- |
| U131 | 00067-72-1 | Ethane, hexachloro- |
| U024 | 00111-91-1 | Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro- |
| U117 | 00060-29-7 | Ethane, 1,1'-oxybis-(I) |
| U025 | 00111-44-4 | Ethane, 1,1'-oxybis[2-chloro- |
| U184 | 00076-01-7 | Ethane, pentachloro- |
| U208 | 00630-20-6 | Ethane, 1,1,1,2-tetrachloro- |
| U209 | 00079-34-5 | Ethane, 1,1,2,2-tetrachloro- |
| U218 | 00062-55-5 | Ethanethioamide |
| U226 | 00071-55-6 | Ethane, 1,1,1-trichloro- |
| U227 | 00079-00-5 | Ethane, 1,1,2-trichloro- |
| U410 | 59669-26-0 | Ethanimidothioic acid, N,N'- [thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester |
| U394 | 30558-43-1 | Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester |
| U359 | 00110-80-5 | Ethanol, 2-ethoxy- |
| U173 | 01116-54-7 | Ethanol, 2,2'-(nitrosoimino)bis- |
| U395 | 5952-26-1 | Ethanol, 2,2'-oxybis-, dicarbamate |
| U004 | 00098-86-2 | Ethanone, 1-phenyl- |
| U043 | 00075-01-4 | Ethene, chloro- |
| U042 | 00110-75-8 | Ethene, (2-chloroethoxy)- |
| U078 | 00075-35-4 | Ethene, 1,1-dichloro- |
| U079 | 00156-60-5 | Ethene, 1,2-dichloro-, (E)- |
| U210 | 00127-18-4 | Ethene, tetrachloro- |
| U228 | 00079-01-6 | Ethene, trichloro- |
| U112 | 00141-78-6 | Ethyl acetate (I) |
| U113 | 00140-88-5 | Ethyl acrylate (I) |
| U238 | 00051-79-6 | Ethyl carbamate (urethane) |
| U117 | 00060-29-7 | Ethyl ether (I) |
| U114 | [1] 00111-54-6 | Ethylenebisdithiocarbamic acid, salts & esters |
| U067 | 00106-93-4 | Ethylene dibromide |
| U077 | 00107-06-2 | Ethylene dichloride |
| U359 | 00110-80-5 | Ethylene glycol monoethyl ether |
| U115 | 00075-21-8 | Ethylene oxide (I,T) |
| U116 | 00096-45-7 | Ethylenethiourea |
| U076 | 00075-34-3 | Ethylidene dichloride |
| U118 | 00097-63-2 | Ethyl methacrylate |
| U119 | 00062-50-0 | Ethyl methanesulfonate |
| U407 | 14324-55-1 | Ethyl Ziram |
| U396 | 14484-64-1 | Ferbam |
| U120 | 00206-44-0 | Fluoranthene |
| U122 | 00050-00-0 | Formaldehyde |
| U123 | 00064-18-6 | Formic acid (C,T) |
| U124 | 00110-00-9 | Furan (I) |
| U125 | 00098-01-1 | 2-Furancarboxaldehyde (I) |
| U147 | 00108-31-6 | 2,5-Furandione |
| U213 | 00109-99-9 | Furan, tetrahydro-(I) |
| U125 | 00098-01-1 | Furfural (I) |
| U124 | 00110-00-9 | Furfuran (I) |
| U206 | 18883-66-4 | Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D- |
| U206 | 18883-66-4 | D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)- carbonyl]amino]- |
| U126 | 00765-34-4 | Glycidylaldehyde |
| U163 | 00070-25-7 | Guanidine, N-methyl-N'-nitro-N-nitroso- |
| U127 | 00118-74-1 | Hexachlorobenzene |
| U128 | 00087-68-3 | Hexachlorobutadiene |
| U130 | 00077-47-4 | Hexachlorocyclopentadiene |
| U131 | 00067-72-1 | Hexachloroethane |
| U132 | 00070-30-4 | Hexachlorophene |
| U243 | 01888-71-7 | Hexachloropropene |
| U133 | 00302-01-2 | Hydrazine (R,T) |
| U086 | 01615-80-1 | Hydrazine, 1,2-diethyl- |
| U098 | 00057-14-7 | Hydrazine, 1,1-dimethyl- |
| U099 | 00540-73-8 | Hydrazine, 1,2-dimethyl- |
| U109 | 00122-66-7 | Hydrazine, 1,2-diphenyl- |
| U134 | 07664-39-3 | Hydrofluoric acid (C,T) |
| U134 | 07664-39-3 | Hydrogen fluoride (C,T) |
| U135 | 07783-06-4 | Hydrogen sulfide |
| U135 | 07783-06-4 | Hydrogen sulfide $H_2S$ |
| U096 | 00080-15-9 | Hydroperoxide, 1-methyl-1-phenylethyl- (R) |
| U116 | 00096-45-7 | 2-Imidazolidinethione |
| U137 | 00193-39-5 | Indeno[1,2,3-cd]pyrene |
| U375 | 55406-53-6 | 3-Iodo-2-propynyl n-butylcarbamate |

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| U396 | 14484-64-1 | Iron, tris(dimethylcarbamodithioato-S,S')-, |
| U190 | 00085-44-9 | 1,3-Isobenzofurandione |
| U140 | 00078-83-1 | Isobutyl alcohol (I,T) |
| U141 | 00120-58-1 | Isosafrole |
| U142 | 00143-50-0 | Kepone |
| U143 | 00303-34-4 | Lasiocarpine |
| U144 | 00301-04-2 | Lead acetate |
| U146 | 01335-32-6 | Lead, bis(acetato-O)tetrahydroxytri- |
| U145 | 07446-27-7 | Lead phosphate |
| U146 | 01335-32-6 | Lead subacetate |
| U129 | 00058-89-9 | Lindane |
| U163 | 00070-25-7 | MNNG |
| U147 | 00108-31-6 | Maleic anhydride |
| U148 | 00123-33-1 | Maleic hydrazide |
| U149 | 00109-77-3 | Malononitrile |
| U150 | 00148-82-3 | Melphalan |
| U151 | 07439-97-6 | Mercury |
| U384 | 137-42-8 | Metam Sodium |
| U152 | 00126-98-7 | Methacrylonitrile (I, T) |
| U092 | 00124-40-3 | Methanamine, N-methyl- (I) |
| U029 | 00074-83-9 | Methane, bromo- |
| U045 | 00074-87-3 | Methane, chloro- (I, T) |
| U046 | 00107-30-2 | Methane, chloromethoxy- |
| U068 | 00074-95-3 | Methane, dibromo- |
| U080 | 00075-09-2 | Methane, dichloro- |
| U075 | 00075-71-8 | Methane, dichlorodifluoro- |
| U138 | 00074-88-4 | Methane, iodo- |
| U119 | 00062-50-0 | Methanesulfonic acid, ethyl ester |
| U211 | 00056-23-5 | Methane, tetrachloro- |
| U153 | 00074-93-1 | Methanethiol (I, T) |
| U225 | 00075-25-2 | Methane, tribromo- |
| U044 | 00067-66-3 | Methane, trichloro- |
| U121 | 00075-69-4 | Methane, trichlorofluoro- |
| U036 | 00057-74-9 | 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro- |
| U154 | 00067-56-1 | Methanol (I) |
| U155 | 00091-80-5 | Methapyrilene |
| U142 | 00143-50-0 | 1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro- |
| U247 | 00072-43-5 | Methoxychlor |
| U154 | 00067-56-1 | Methyl alcohol (I) |
| U029 | 00074-83-9 | Methyl bromide |
| U186 | 00504-60-9 | 1-Methylbutadiene (I) |
| U045 | 00074-87-3 | Methyl chloride (I,T) |
| U156 | 00079-22-1 | Methyl chlorocarbonate (I,T) |
| U226 | 00071-55-6 | Methyl chloroform |
| U157 | 00056-49-5 | 3-Methylcholanthrene |
| U158 | 00101-14-4 | 4,4'-Methylenebis(2-chloroaniline) |
| U068 | 00074-95-3 | Methylene bromide |
| U080 | 00075-09-2 | Methylene chloride |
| U159 | 00078-93-3 | Methyl ethyl ketone (MEK) (I,T) |
| U160 | 01338-23-4 | Methyl ethyl ketone peroxide (R,T) |
| U138 | 00074-88-4 | Methyl iodide |
| U161 | 00108-10-1 | Methyl isobutyl ketone (I) |
| U162 | 00080-62-6 | Methyl methacrylate (I,T) |
| U161 | 00108-10-1 | 4-Methyl-2-pentanone (I) |
| U164 | 00056-04-2 | Methylthiouracil |
| U010 | 00050-07-7 | Mitomycin C |
| U365 | 2212-67-1 | Molinate |
| U059 | 20830-81-3 | 5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl) oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)- |
| U167 | 00134-32-7 | 1-Naphthalenamine |
| U168 | 00091-59-8 | 2-Naphthalenamine |
| U026 | 00494-03-1 | Naphthalenamine, N,N'-bis(2-chloroethyl)- |
| U165 | 00091-20-3 | Naphthalene |
| U047 | 00091-58-7 | Naphthalene, 2-chloro- |
| U166 | 00130-15-4 | 1,4-Naphthalenedione |
| U236 | 00072-57-1 | 2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt |
| U279 | 63-25-2 | 1-Naphthalenol, methylcarbamate |
| U166 | 00130-15-4 | 1,4-Naphthoquinone |
| U167 | 00134-32-7 | alpha-Naphthylamine |
| U168 | 00091-59-8 | beta-Naphthylamine |
| U217 | 10102-45-1 | Nitric acid, thallium(1+) salt |

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| U169 | 00098-95-3 | Nitrobenzene (I,T) |
| U170 | 00100-02-7 | p-Nitrophenol |
| U171 | 00079-46-9 | 2-Nitropropane (I,T) |
| U172 | 00924-16-3 | N-Nitrosodi-n-butylamine |
| U173 | 01116-54-7 | N-Nitrosodiethanolamine |
| U174 | 00055-18-5 | N-Nitrosodiethylamine |
| U176 | 00759-73-9 | N-Nitroso-N-ethylurea |
| U177 | 00684-93-5 | N-Nitroso-N-methylurea |
| U178 | 00615-53-2 | N-Nitroso-N-methylurethane |
| U179 | 00100-75-4 | N-Nitrosopiperidine |
| U180 | 00930-55-2 | N-Nitrosopyrrolidine |
| U181 | 00099-55-8 | 5-Nitro-o-toluidine |
| U193 | 01120-71-4 | 1,2-Oxathiolane, 2,2-dioxide |
| U058 | 00050-18-0 | 2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide |
| U115 | 00075-21-8 | Oxirane (I,T) |
| U126 | 00765-34-4 | Oxiranecarboxyaldehyde |
| U041 | 00106-89-8 | Oxirane, (chloromethyl)- |
| U182 | 00123-63-7 | Paraldehyde |
| U391 | 1114-71-2 | Pebulate |
| U183 | 00608-93-5 | Pentachlorobenzene |
| U184 | 00076-01-7 | Pentachloroethane |
| U185 | 00082-68-8 | Pentachloronitrobenzene (PCNB) |
| See F027 | 00087-86-5 | Pentachlorophenol |
| U161 | 00108-10-1 | Pentanol, 4-methyl- |
| U186 | 00504-60-9 | 1,3-Pentadiene (I) |
| U187 | 00062-44-2 | Phenacetin |
| U188 | 00108-95-2 | Phenol |
| U048 | 00095-57-8 | Phenol, 2-chloro- |
| U039 | 00059-50-7 | Phenol, 4-chloro-3-methyl- |
| U081 | 00120-83-2 | Phenol, 2,4-dichloro- |
| U082 | 00087-65-0 | Phenol, 2,6-dichloro- |
| U089 | 00056-53-1 | Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)- |
| U101 | 00105-67-9 | Phenol, 2,4-dimethyl- |
| U052 | 01319-77-3 | Phenol, methyl- |
| U411 | 114-26-1 | Phenol, 2-(1-methylethoxy)-, methylcarbamate |
| U132 | 00070-30-4 | Phenol, 2,2'-methylenebis[3,4,6-trichloro- |
| U170 | 00100-02-7 | Phenol, 4-nitro- |
| See F027 | 00087-86-5 | Phenol, pentachloro- |
| See F027 | 00058-90-2 | Phenol, 2,3,4,6-tetrachloro- |
| See F027 | 00095-95-4 | Phenol, 2,4,5-trichloro- |
| See F027 | 00088-06-2 | Phenol, 2,4,6-trichloro- |
| U150 | 00148-82-3 | L-Phenylalanine, 4-[bis(2-chloroethyl)amino]- |
| U145 | 07446-27-7 | Phosphoric acid, lead(2+) salt (2:3) |
| U087 | 03288-58-2 | Phosphorodithioic acid, O,O-diethyl S-methyl ester |
| U189 | 01314-80-3 | Phosphorus sulfide (R) |
| U190 | 00085-44-9 | Phthalic anhydride |
| U191 | 00109-06-8 | 2-Picoline |
| U179 | 00100-75-4 | Piperidine, 1-nitroso- |
| U400 | 120-54-7 | Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis- |
| U383 | 128-03-0 | Potassium dimethyldithiocarbamate |
| U378 | 51026-28-9 | Potassium n-hydroxymethyl- n-methyldi-thiocarbamate |
| U377 | 137-41-7 | Potassium n-methyldithiocarbamate |
| U192 | 23950-58-5 | Pronamide |
| U194 | 00107-10-8 | 1-Propanamine (I,T) |
| U111 | 00621-64-7 | 1-Propanamine, N-nitroso-N-propyl- |
| U110 | 00142-84-7 | 1-Propanamine, N-propyl- (I) |
| U066 | 00096-12-8 | Propane, 1,2-dibromo-3-chloro- |
| U083 | 00078-87-5 | Propane, 1,2-dichloro- |
| U149 | 00109-77-3 | Propanedinitrile |
| U171 | 00079-46-9 | Propane, 2-nitro- (I,T) |
| U027 | 00108-60-1 | Propane, 2,2'-oxybis[2-chloro- |
| U193 | 01120-71-4 | 1,3-Propane sultone |
| See F027 | 00093-72-1 | Propanoic acid, 2-(2,4,5-trichlorophenoxy)- |
| U235 | 00126-72-7 | 1-Propanol, 2,3-dibromo-, phosphate (3:1) |
| U140 | 00078-83-1 | 1-Propanol, 2-methyl- (I,T) |
| U002 | 00067-64-1 | 2-Propanone (I) |
| U007 | 00079-06-1 | 2-Propenamide |
| U084 | 00542-75-6 | 1-Propene, 1,3-dichloro- |
| U243 | 01888-71-7 | 1-Propene, 1,1,2,3,3,3-hexachloro- |
| U009 | 00107-13-1 | 2-Propenenitrile |
| U152 | 00126-98-7 | 2-Propenenitrile, 2-methyl- (I,T) |
| U008 | 00079-10-7 | 2-Propenoic acid (I) |
| U113 | 00140-88-5 | 2-Propenoic acid, ethyl ester (I) |
| U118 | 00097-63-2 | 2-Propenoic acid, 2-methyl-, ethyl ester |

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| U162 | 00080-62-6 | 2-Propenoic acid, 2-methyl-, methyl ester (I,T) |
| U373 | 112-42-9 | Propham |
| U411 | 114-26-1 | Propoxur |
| U194 | 00107-10-8 | n-Propylamine (I,T) |
| U083 | 00078-87-5 | Propylene dichloride |
| U387 | 52888-80-9 | Prosulfocarb |
| U148 | 00123-33-1 | 3,6-Pyridazinedione, 1,2-dihydro- |
| U196 | 00110-86-1 | Pyridine |
| U191 | 00109-06-8 | Pyridine, 2-methyl- |
| U237 | 00066-75-1 | 2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2- chloroethyl)amino]- |
| U164 | 00056-04-2 | 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- |
| U180 | 00930-55-2 | Pyrrolidine, 1-nitroso- |
| U200 | 00050-55-5 | Reserpine |
| U201 | 00108-46-3 | Resorcinol |
| U202 | [1] 00081-07-2 | Saccharin, & salts |
| U203 | 00094-59-7 | Safrole |
| U204 | 07783-00-8 | Selenious acid |
| U376 | 144-34-3 | Selenium, tetrakis(dimethyldithiocarbamate) |
| U204 | 07783-00-8 | Selenium dioxide |
| U205 | 07488-56-4 | Selenium sulfide |
| U205 | 07488-56-4 | Selenium sulfide $SeS_2$ (R,T) |
| U015 | 00115-02-6 | L-Serine, diazoacetate (ester) |
| See F027 | 00093-72-1 | Silvex (2,4,5-TP) |
| U379 | 136-30-1 | Sodium dibutyldithiocarbamate |
| U381 | 148-18-5 | Sodium diethyldithiocarbamate |
| U382 | 128-04-1 | Sodium dimethyldithiocarbamate |
| U206 | 18883-66-4 | Streptozotocin |
| U277 | 95-06-7 | Sulfallate |
| U103 | 00077-78-1 | Sulfuric acid, dimethyl ester |
| U189 | 01314-80-3 | Sulfur phosphide (R) |
| See F027 | 00093-76-5 | 2,4,5-T |
| U402 | 1634-02-2 | Tetrabutylthiuram disulfide |
| U207 | 00095-94-3 | 1,2,4,5-Tetrachlorobenzene |
| U208 | 00630-20-6 | 1,1,1,2-Tetrachloroethane |
| U209 | 00079-34-5 | 1,1,2,2-Tetrachloroethane |
| U210 | 00127-18-4 | Tetrachloroethylene |
| See F027 | 00058-90-2 | 2,3,4,6-Tetrachlorophenol |
| U213 | 00109-99-9 | Tetrahydrofuran (I) |
| U401 | 97-74-5 | Tetramethylthiuram monosulfide |
| U214 | 00563-68-8 | Thallium(I) acetate |
| U215 | 06533-73-9 | Thallium(I) carbonate |
| U216 | 07791-12-0 | Thallium(I) chloride |
| U216 | 07791-12-0 | Thallium chloride TlCl |
| U217 | 10102-45-1 | Thallium(I) nitrate |
| U366 | 533-74-4 | 2H-1,3,5-Thiadiazine- 2-thione, tetrahydro-3,5-dimethyl- |
| U218 | 00062-55-5 | Thioacetamide |
| U410 | 59669-26-0 | Thiodicarb |
| U153 | 00074-93-1 | Thiomethanol (I,T) |
| U402 | 1634-02-2 | Thioperoxydicarbonic diamide, tetrabutyl |
| U403 | 97-77-8 | Thioperoxydicarbonic diamide, tetraethyl |
| U244 | 00137-26-8 | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl- |
| U409 | 23564-05-8 | Thiophanate-methyl |
| U219 | 00062-56-6 | Thiourea |
| U244 | 00137-26-8 | Thiram |
| U220 | 00108-88-3 | Toluene |
| U221 | 25376-45-8 | Toluenediamine |
| U223 | 26471-62-5 | Toluene diisocyanate (R,T) |
| U328 | 00095-53-4 | o-Toluidine |
| U353 | 00106-49-0 | p-Toluidine |
| U222 | 00636-21-5 | o-Toluidine hydrochloride |
| U389 | 2303-17-5 | Triallate |
| U011 | 00061-82-5 | 1H-1,2,4-Triazol-3-amine |
| U227 | 00079-00-5 | 1,1,2-Trichloroethane |
| U228 | 00079-01-6 | Trichloroethylene |
| U121 | 00075-69-4 | Trichloromonofluoromethane |
| See F027 | 00095-95-4 | 2,4,5-Trichlorophenol |
| See F027 | 00088-06-2 | 2,4,6-Trichlorophenol |
| U404 | 121-44-8 | Triethylamine |
| U234 | 00099-35-4 | 1,3,5-Trinitrobenzene (R,T) |
| U182 | 00123-63-7 | 1,3,5-Trioxane, 2,4,6-trimethyl- |
| U235 | 00126-72-7 | Tris(2,3-dibromopropyl) phosphate |
| U236 | 00072-57-1 | Trypan blue |
| U237 | 00066-75-1 | Uracil mustard |
| U176 | 00759-73-9 | Urea, N-ethyl-N-nitroso- |

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| U177 | 00684-93-5 | Urea, N-methyl-N-nitroso- |
| U385 | 1929-77-7 | Vernolate |
| U043 | 00075-01-4 | Vinyl chloride |
| U248 | [1] 00081-81-2 | Warfarin, & salts, when present at concentrations of 0.3% or less |
| U239 | 01330-20-7 | Xylene (I) |
| U200 | 00050-55-5 | Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)- |
| U407 | 14324-55-1 | Zinc, bis(diethylcarbamodithioato-S,S')- |
| U249 | 01314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations of 10% or less |

[1] CAS Number given for parent compound only.

SECTION 60. NR 605.10(6)(Note) is amended to read:

NR 605.10(6)Note: For the purpose of this section, petitions under subs. (2) and (6) are petitions for rules under s. 227.12, Stats. ~~The publication containing Title 42 of the United States Code may be obtained from:~~

~~The Superintendent of Documents~~
~~U.S. Government Printing Office~~
~~Washington, D.C. 20402~~

SECTION 61. NR 605.10(7) is created to read:

NR 605.10(7)(a) Any person seeking to add a hazardous waste or a category of hazardous waste to the universal waste regulations of ch. NR 690 may petition for a regulatory amendment under this section, s. 227.12(1), Stats., and subchapter VII of ch. NR 690.

(b) To be successful, the petitioner shall demonstrate to the satisfaction of the department that regulation under the universal waste regulations of ch. NR 690 will do all of the following:

1. Be appropriate for the waste or category of waste.

2. Improve management practices for the waste or category of waste.

3. Improve implementation of the hazardous waste program.

(c) The petition shall include the information required by s. 227.12(1), Stats. The petition shall also address as many of the factors listed in s. NR 690.81 as are appropriate for the waste or category of waste addressed in the petition.

(d) The department shall grant or deny a petition using the factors listed in s. NR 690.81. The decision will be based on the weight of evidence showing that regulation under ch. NR 690 is appropriate for the waste or category of waste, will improve management

practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

(e) The department may request additional information needed to evaluate the merits of the petition.

SECTION 62. NR 605 Appendix I subs. (6) and (7) are amended to read:

NR 605 Appendix I(6) For containerized liquid wastes - "COLIWASA" described in ~~SW-846,~~ "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods"~~, third edition, September, 1986, as amended by update I in July, 1992~~.

(7) For liquid waste in pits, ponds, lagoons and similar reservoirs - "Pond Sampler" described in ~~SW-846,~~ "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1.

Note: Copies of "COLIWASA" and "Pond Sampler" may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268. These methods are also described in "Samplers and Sampling Procedures for Hazardous Waste Streams, EPA 600/2-80-018, January 1980. "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods" also contains additional information on application of these protocols.

SECTION 63. NR 605 Appendix II is amended to read:

Chapter NR 605

Appendix II
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 EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c). 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.

~~Note: Publication SW-846 may be obtained from:~~

~~Superintendent of Documents~~
~~U.S. Government Printing Office~~

~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state, and the revisor of statutes.~~

SECTION 64. NR 605 Appendix III is amended to read:

## APPENDIX III

## BASIS FOR LISTING HAZARDOUS WASTES

| Hazardous waste No. | Hazardous constituents for which listed |
|---|---|
| F001 | Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons. |
| F002 | Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane. |
| F003 | N.A. |
| F004 | Cresols and cresylic acid, nitrobenzene. |
| F005 | Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane. |
| F006 | Cadmium, hexavalent chromium, nickel, cyanide (complexed). |
| F007 | Cyanide (salts). |
| F008 | Cyanide (salts). |
| F009 | Cyanide (salts). |
| F010 | Cyanide (salts). |
| F011 | Cyanide (salts). |
| F012 | Cyanide (complexed). |
| F019 | Hexavalent chromium, cyanide (complexed). |
| F020 | Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts. |
| F021 | Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives. |
| F022 | Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans. |
| F023 | Tetra-, and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts. |
| F024 | Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, trans-1-2-dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetra-chloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorobenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene. |
| F025 | Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrachloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butadiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene. |
| F026 | Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans. |
| F027 | Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts. |
| F028 | Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts. |

| | |
|---|---|
| F032 | Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans. |
| F034 | Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium. |
| F035 | Arsenic, chromium, lead. |
| F037 | Benzene, benzo(a)pyrene, chrysene, lead, chromium. |
| F038 | Benzene, benzo(a)pyrene chrysene, lead, chromium. |
| F039 | All constituents for which treatment standards are specified for multi-source leachate wastewaters and nonwastewaters under s. NR 675.23(1), table CCW. |
| F500 | Same as F001 and F002. |
| K001 | Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, cresosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene. |
| K002 | Hexavalent chromium, lead. |
| K003 | Hexavalent chromium, lead. |
| K004 | Hexavalent chromium. |
| K005 | Hexavalent chromium, lead. |
| K006 | Hexavalent chromium. |
| K007 | Cyanide (complexed), hexavalent chromium. |
| K008 | Hexavalent chromium. |
| K009 | Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid. |
| K010 | Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde. |
| K011 | Acrylonitrile, acetonitrile, hydrocyanic acid. |
| K013 | Hydrocyanic acid, acrylonitrile, acetonitrile. |
| K014 | Acetonitrile, acrylamide. |
| K015 | Benzyl chloride, chlorobenzene, toluene, benzotrichloride. |
| K016 | Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene. |
| K017 | Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols. |
| K018 | 1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene. |
| K019 | Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride. |
| K020 | Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride. |
| K021 | Antimony, carbon tetrachloride, chloroform. |
| K022 | Phenol, tars (polycyclic aromatic hydrocarbons). |
| K023 | Phthalic anhydride, maleic anhydride. |
| K024 | Phthalic anhydride, 1,4-naphthoquinone. |
| K025 | Meta-dinitrobenzene, 2,4-dinitrotoluene. |
| K026 | Paraldehyde, pyridines, 2-picoline. |
| K027 | Toluene diisocyanate, toluene-2, 4-diamine. |
| K028 | 1,1,1-trichloroethane, vinyl chloride. |
| K029 | 1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform. |
| K030 | Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride. |
| K031 | Arsenic. |
| K032 | Hexachlorocyclopentadiene. |
| K033 | Hexachlorocyclopentadiene. |
| K034 | Hexachlorocyclopentadiene. |
| K035 | Creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene. |
| K036 | Toluene, phosphorodithioic and phosphorothioic acid esters. |
| K037 | Toluene, phosphorodithioic and phosphorothioic acid esters. |
| K038 | Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters. |
| K039 | Phosphorodithioic and phosphorothioic acid esters. |
| K040 | Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters. |
| K041 | Toxaphene. |
| K042 | Hexachlorobenzene, ortho-dichlorobenzene. |
| K043 | 2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol. |
| K044 | N.A. |
| K045 | N.A. |
| K046 | Lead. |
| K047 | N.A. |
| K048 | Hexavalent chromium, lead. |
| K049 | Hexavalent chromium, lead. |
| K050 | Hexavalent chromium. |
| K051 | Hexavalent chromium, lead. |

| | |
|---|---|
| K052 | Lead. |
| K060 | Cyanide, napthalene, phenolic compounds, arsenic. |
| K061 | Hexavalent chromium, lead, cadmium. |
| K062 | Hexavalent chromium, lead. |
| K064 | Lead, cadmium. |
| K065 | Do. |
| K066 | Do. |
| K069 | Hexavalent chromium, lead, cadmium. |
| K071 | Mercury. |
| K073 | Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane. |
| K083 | Aniline, diphenylamine, nitrobenzene, phenylenediamine. |
| K084 | Arsenic. |
| K085 | Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride. |
| K086 | Lead, hexavalent chromium. |
| K087 | Phenol, naphthalene. |
| K088 | Cyanide (complexes). |
| K090 | Chromium. |
| K091 | Do. |
| K093 | Phthalic anhydride, maleic anhydride. |
| K094 | Phthalic anhydride. |
| K095 | 1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane. |
| K096 | 1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane. |
| K097 | Chlordane, heptachlor. |
| K098 | Toxaphene. |
| K099 | 2,4-dichlorophenol, 2,4,6-trichlorophenol. |
| K100 | Hexavalent chromium, lead, cadmium. |
| K101 | Arsenic. |
| K102 | Arsenic. |
| K103 | Aniline, nitrobenzene, phenylenediamine. |
| K104 | Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine. |
| K105 | Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol. |
| K106 | Mercury. |
| K107 | 1,1-Dimethylhydrazine (UDMH). |
| K108 | 1,1-Dimethylhydrazine (UDMH). |
| K109 | 1,1-Dimethylhydrazine (UDMH). |
| K110 | 1,1-Dimethylhydrazine (UDMH). |
| K111 | 2,4-Dinitrotoluene. |
| K112 | 2,4-Toluenediamine, o-toluidine, p-toluidine, aniline. |
| K113 | 2,4-Toluenediamine, o-toluidine, p-toluidine, aniline. |
| K114 | 2,4-Toluenediamine, o-toluidine, p-toluidine. |
| K115 | 2,4-Toluenediamine. |
| K116 | Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene. |
| K117 | Ethylene dibromide. |
| K118 | Ethylene dibromide. |
| K123 | Ethylene thiourea. |
| K124 | Ethylene thiourea. |
| K125 | Ethylene thiourea. |
| K126 | Ethylene thiourea. |
| K131 | Dimethyl sulfate, methyl bromide. |
| K132 | Methyl bromide. |
| K136 | Ethylene dibromide. |
| K141 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K142 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K143 | Benzene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene. |
| K144 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene. |
| K145 | Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, naphthalene. |
| K147 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K148 | Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K149 | Benzotrichloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toluene. |
| K150 | Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,2,4-trichlorobenzene. |
| K151 | Benzene, carbon tetrachloride, chloroform, hexachlorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene. |
| K156 | Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine. |

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|---|---|
| K157 | Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine. |
| K158 | Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride. |
| K159 | Benzene, butylate, eptc, molinate, pebulate, vernolate. |
| K160 | Benzene, butylate, eptc, molinate, pebulate, vernolate. |
| K161 | Antimony, arsenic, metam-sodium, ziram. |

N.A. - Waste is hazardous because it meets either the ignitability, corrosivity or reactivity characteristics.

SECTION 65. NR 605 Appendix IV is amended to read:

## APPENDIX IV

## HAZARDOUS CONSTITUENTS

A solid waste which contains any of the hazardous constituents listed in this appendix shall be listed in s. NR 605.09 as a hazardous waste unless the department concludes, after considering the factors in s. NR 605.07(2)(a)3., that the waste is not capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed or otherwise managed.

Note: Section NR 605.07(2)(a) identifies criteria for listing hazardous waste. A waste containing any of the constituents in this appendix is examined by the department using these criteria. If the department determines the waste should be listed, it will be included under: Table II, Hazardous Waste from Nonspecific Sources; Table III, Hazardous Waste from Specific Sources; Table IV, Acute Hazardous Commercial Chemical Products and Manufacturing Chemical Intermediates; or Table V, Toxic Commercial Chemical Products and Manufacturing Chemical Intermediates. One shall not assume that a waste containing one or more of the constituents in this appendix will automatically be a hazardous waste. In this appendix, the abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name.

| Common name | Chemical abstracts name | Chemical abstracts No. | Hazardous waste No. |
|---|---|---|---|
| A2213 | Ethanimidothioic acid, 2- (dimethylamino) -N-hydroxy-2-oxo-, methyl ester | 30558-43-1 | U394 |
| Acetonitrile | Same | 00075-05-8 | U003 |
| Acetophenone | Ethanone, 1-phenyl- | 00098-86-2 | U004 |
| 2-Acetylaminefluarone | Acetamide, N-9H-fluoren-2-yl- | 00053-96-3 | U005 |
| Acetyl chloride | Same | 00075-36-5 | U006 |
| 1-Acetyl-2-thiourea | Acetamide, N-(aminothioxomethyl)- | 00591-08-2 | P002 |
| Acrolein | 2-Propenal | 00107-02-8 | P003 |
| Acrylamide | 2-Propenamide | 00079-06-1 | U007 |
| Acrylonitrile | 2-Propenenitrile | 00107-13-1 | U009 |
| Aflatoxins | Same | 01402-68-2 | |
| Aldicarb | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime | 00116-06-3 | P070 |
| Aldicarb sulfone | Propanal, 2-methyl-2- (methylsulfonyl) -, O-[(methylamino) carbonyl] oxime | 1646-88-4 | P203 |
| Aldrin | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha, 8abeta)- | 00309-00-2 | P004 |
| Allyl alcohol | 2-Propen-1-ol | 00107-18-6 | P005 |
| Allyl chloride | 1-Propane, 3-chloro | 00107-18-6 | |
| Aluminum phosphide | Same | 20859-73-8 | P006 |
| 4-Aminobiphenyl | [1,1'-Biphenyl]-4-amine | 00092-67-1 | |
| 5-(Aminomethyl)-3-isoxazolol | 3(2H)-Isoxazolone, 5-(aminomethyl)- | 02763-96-4 | P007 |
| 4-Aminopyridine | 4-Pyridinamine | 00504-24-5 | P008 |
| Amitrole | 1H-1,2,4-Triazol-3-amine | 00061-82-5 | U011 |

| | | | |
|---|---|---|---|
| Ammonium vanadate | Vanadic acid, ammonium salt | 07803-55-6 | P119 |
| Aniline | Benzenamine | 00062-53-3 | U012 |
| Antimony | Same | 07440-36-0 | |
| Antimony compounds, N.O.S.[1] | | | |
| Aramite | Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester | 00140-57-8 | |
| Arsenic | Same | 07440-38-2 | |
| Arsenic compounds, N.O.S.[1] | | | |
| Arsenic acid | Arsenic acid $H_3AsO_4$ | 07778-39-4 | P010 |
| Arsenic pentoxide | Arsenic oxide $As_2O_5$ | 01303-28-2 | P011 |
| Arsenic trioxide | Arsenic oxide $As_2O_3$ | 01327-53-3 | P012 |
| Auramine | Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl | 00492-80-8 | U014 |
| Azaserine | L-Serine, diazoacetate (ester) | 00115-02-6 | U015 |
| Barban | Carbamic acid, (3-chlorophenyl) -, 4-chloro-2-butynyl ester | 101-27-9 | U280 |
| Barium | Same | 07440-39-3 | |
| Barium compounds, N.O.S.[1] | | | |
| Barium cyanide | Same | 00542-62-1 | P013 |
| Bendiocarb | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate | 22781-23-3 | U278 |
| Bendiocarb phenol | 1,3-Benzodioxol-4-ol, 2,2-dimethyl- | 22961-82-6 | U364 |
| Benomyl | Carbamic acid, [1- [(butylamino) carbonyl]-1H-benzimidazol-2-yl] -, methyl ester | 17804-35-2 | U271 |
| Benz[c]acridine | Same | 00225-51-4 | U016 |
| Benz[a]anthracene | Same | 00056-55-3 | U018 |
| Benzal chloride | Benzene, (dichloromethyl)- | 00098-87-3 | U017 |
| Benzene | Same | 00071-43-2 | U019 |
| Benzenearsonic acid | Arsonic acid, phenyl- | 00098-05-5 | |
| Benzidine | [1,1'-Biphenyl]-4,4'-diamine | 00092-87-5 | U021 |
| Benzo[b]fluoranthene | Benz[e]acephenanthrylene | 00205-99-2 | |
| Benzo[j]fluoranthene | Same | 00205-82-3 | |
| Benzo(k)fluoranthene | Same | 00207-08-9 | |
| Benzo[a]pyrene | Same | 00050-32-8 | U022 |
| p-Benzoquinone | 2,5-Cyclohexadiene-1,4-dione | 00106-51-4 | U197 |
| Benzotrichloride | Benzene, (trichloromethyl)- | 00098-07-7 | U023 |
| Benzyl chloride | Benzene, (chloromethyl)- | 00100-44-7 | P028 |
| Beryllium | Same | 07440-41-7 | P015 |
| Beryllium compounds, N.O.S.[1] | | | |
| Beryllium powder | Same | 7440-41-7 | P015 |
| Bis (pentamethylene)-thiuram tetrasulfide | Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis- | 120-54-7 | U400 |
| Bromoacetone | 2-Propanone, 1-bromo- | 00598-31-2 | P017 |
| Bromoform | Methane, tribromo- | 00075-25-2 | U225 |
| 4-Bromophenyl phenyl ether | Benzene, 1-bromo-4-phenoxy- | 00101-55-3 | U030 |
| Brucine | Strychnidin-10-one, 2,3-dimethoxy- | 00357-57-3 | P018 |
| Butylate | Carbamothioic acid, bis (2-methylpropyl)-, S-ethyl ester | 2008-41-5 | U392 |
| Butyl benzyl phthalate | 1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester | 00085-68-7 | |
| Cacodylic acid | Arsinic acid, dimethyl- | 00075-60-5 | U136 |
| Cadmium | Same | 07440-43-9 | |
| Cadmium compounds, N.O.S.[1] | | | |
| Calcium chromate | Chromic acid $H_2CrO_4$, calcium salt | 13765-19-0 | U032 |
| Calcium cyanide | Calcium cyanide $Ca(CN)_2$ | 00592-01-8 | P021 |
| Carbaryl | 1-Naphthalenol, methylcarbamate | 63-25-2 | U279 |
| Carbendazim | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester | 10605-21-7 | U372 |
| Carbofuran | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate | 1563-66-2 | P127 |
| Carbofuran phenol | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- | 1563-38-8 | U367 |
| Carbon disulfide | Same | 00075-15-0 | P022 |
| Carbon oxyfluoride | Carbonic difluoride | 00353-50-4 | U033 |
| Carbon tetrachloride | Methane, tetrachloro- | 00056-23-5 | U211 |
| Carbosulfan | Carbamic acid, [(dibutylamino) thio] methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester | 55285-14-8 | P189 |
| Chloral | Acetaldehyde, trichloro- | 00075-87-6 | U034 |
| Chlorambucil | Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]- | 00305-03-3 | U035 |
| Chlordane | 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro- | 00057-74-9 | U036 |
| Chlordane (alpha and gamma isomers) | | | U036 |

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| Chlorinated benzenes, N.O.S.[1] | | | |
| Chlorinated ethane, N.O.S.[1] | | | |
| Chlorinated fluorocarbons, N.O.S.[1] | | | |
| Chlorinated naphthalene, N.O.S.[1] | | | |
| Chlorinated phenol, N.O.S.[1] | | | |
| Chlornaphazin | Naphthalenamine, N,N'-bis(2-chloroethyl)- | 00494-03-1 | U026 |
| Chloroacetaldehyde | Acetaldehyde, chloro- | 00107-20-0 | P023 |
| Chloroalkyl ethers, N.O.S.[1] | | | |
| p-Chloroaniline | Benzenamine, 4-chloro- | 00106-47-8 | P024 |
| Chlorobenzene | Benzene, chloro- | 00108-90-7 | U037 |
| Chlorobenzilate | Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester | 00510-15-6 | U038 |
| p-Chloro-m-cresol | Phenol, 4-chloro-3-methyl- | 00059-50-7 | U039 |
| 2-Chloroethyl vinyl ether | Ethene, (2-chloroethoxy)- | 00110-75-8 | U042 |
| Chloroform | Methane, trichloro- | 00067-66-3 | U044 |
| Chloromethyl methyl ether | Methane, chloromethoxy- | 00107-30-2 | U046 |
| beta-Chloronaphthalene | Naphthalene, 2-chloro- | 00091-58-7 | U047 |
| o-Chlorophenol | Phenol, 2-chloro- | 00095-57-8 | U048 |
| 1-(o-Chlorophenyl)thiourea | Thiourea, (2-chlorophenyl)- | 05344-82-1 | P026 |
| Chloroprene | 1,3-Butadiene, 2-chloro- | 00126-99-8 | |
| 3-Chloropropionitrile | Propanenitrile, 3-chloro- | 00542-76-7 | P027 |
| Chromium | Same | 07440-47-3 | |
| Chromium compounds, N.O.S.[1] | | | |
| Chrysene | Same | 00218-01-9 | U050 |
| Citrus red No. 2 | 2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]- | 06358-53-8 | |
| Coal tar creosote | Same | 08007-45-2 | |
| Copper cyanide | Copper cyanide CuCN | 00544-92-3 | P029 |
| Copper dimethyldithiocarbamate | Copper, bis(dimethylcarbamodithioato-S,S')-, | 137-29-1 | U393 |
| Creosote | Same | | U051 |
| Cresol (Cresylic acid) | Phenol, methyl- | 01319-77-3 | U052 |
| Crotonaldehyde | 2-Butenal | 04170-30-3 | U053 |
| m-Cumenyl methylcarbamate | Phenol, 3-(methylethyl)-, methyl carbamate | 64-00-6 | P202 |
| Cyanides (soluble salts and complexes) N.O.S.[1] | | | P030 |
| Cyanogen | Ethanedinitrile | 00460-19-5 | P031 |
| Cyanogen bromide | Cyanogen bromide (CN)Br | 00506-68-3 | U246 |
| Cyanogen chloride | Cyanogen chloride (CN)Cl | 00506-77-4 | P033 |
| Cycasin | beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl | 14901-08-7 | |
| Cycloate | Carbamothioic acid, cyclohexylethyl-, S-ethyl ester | 1134-23-2 | U386 |
| 2-Cyclohexyl-4,6-dinitrophenol | Phenol, 2-cyclohexyl-4,6-dinitro- | 00131-89-5 | P034 |
| Cyclophosphamide | 2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide | 00050-18-0 | U058 |
| 2,4-D | Acetic acid, (2,4-dichlorophenoxy)- | 00094-75-7 | U240 |
| 2,4-D, salts, esters | | | U240 |
| Daunomycin | 5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)- | 20830-81-3 | U059 |
| Dazomet | 2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl | 533-74-4 | U366 |
| DDD | Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro- | 00072-54-8 | U060 |
| DDE | Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro- | 00072-55-9 | |
| DDT | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro- | 00050-29-3 | U061 |
| Diallate | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester | 02303-16-4 | U062 |
| Dibenz[a,h]acridine | Same | 00226-36-8 | |
| Dibenz[a,j]acridine | Same | 00224-42-0 | |
| Dibenz[a,h]anthracene | Same | 00053-70-3 | U063 |
| 7H-Dibenzo[c,g]carbazole | Same | 00194-59-2 | |
| Dibenzo[a,e]pyrene | Naphtho[1,2,3,4-def]chrysene | 00192-65-4 | |
| Dibenzo[a,h]pyrene | Dibenzo[b,def]chrysene | 00189-64-0 | |
| Dibenzo[a,i]pyrene | Benzo[rst]pentaphene | 00189-55-9 | U064 |
| 1,2-Dibromo-3-chloropropane | Propane, 1,2-dibromo-3-chloro- | 00096-12-8 | U066 |

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| Dibutyl phthalate | 1,2-Benzenedicarboxylic acid, dibutyl ester | 00084-74-2 | U069 |
| o-Dichlorobenzene | Benzene, 1,2-dichloro- | 00095-50-1 | U070 |
| m-Dichlorobenzene | Benzene, 1,3-dichloro- | 00541-73-1 | U071 |
| p-Dichlorobenzene | Benzene, 1,4-dichloro- | 00106-46-7 | U072 |
| Dichlorobenzene, N.O.S.[1] | Benzene, dichloro- | 25321-22-6 | |
| 3,3'-Dichlorobenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- | 00091-94-1 | U073 |
| 1,4-Dichloro-2-butene | 2-Butene, 1,4-dichloro- | 00764-41-0 | U074 |
| Dichlorodifluoromethane | Methane, dichlorodifluoro- | 00075-71-8 | U075 |
| Dichloroethylene, N.O.S.[1] | Dichloroethylene | 25323-30-2 | |
| 1,1-Dichloroethylene | Ethene, 1,1-dichloro- | 00075-35-4 | U078 |
| 1,2-Dichloroethylene | Ethene, 1,2-dichlrol-, (E)- | 00156-60-5 | U079 |
| Dichloroethyl ether | Ethane, 1,1'oxybis[2-chloro- | 00111-44-4 | U025 |
| Dichloroisopropyl ether | Propane, 2,2'-oxybis[2-chloro- | 00108-60-1 | U027 |
| Dichloromethoxy ethane | Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro- | 00111-91-1 | U024 |
| Dichloromethyl ether | Methane, oxybis[chloro- | 00542-88-1 | P016 |
| 2,4-Dichlorophenol | Phenol, 2,4-dichloro- | 00120-83-2 | U081 |
| 2,6-Dichlorophenol | Phenol, 2,6-dichloro- | 00087-65-0 | U082 |
| Dichlorophenylarsine | Arsonous dichloride, phenyl- | 00696-28-6 | P036 |
| Dichloropropane, N.O.S.[1] | Propane, dichloro- | 26638-19-7 | |
| Dichloropropanol, N.O.S.[1] | Propanol, dichloro- | 26545-73-3 | |
| Dichloropropene, N.O.S.[1] | 1-Propene, dichloro- | 26952-23-8 | |
| 1,3-Dichloropropene | 1-Propene, 1,3-dichloro- | 00542-75-6 | U084 |
| Dieldrin | 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)- | 00060-57-1 | P037 |
| 1,2:3,4-Diepoxybutane | 2,2'-Bioxirane | 01464-53-5 | U085 |
| Diethylarsine | Arsine, diethyl- | 00692-42-2 | P038 |
| Diethylene glycol, dicarbamate | Ethanol, 2,2'-oxybis-, dicarbamate | 5952-26-1 | U395 |
| 1,4-Diethyleneoxide | 1,4-Dioxane | 00123-91-1 | U108 |
| Diethylhexyl phthalate | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester | 00117-81-7 | U028 |
| N,N'-Diethylhydrazine | Hydrazine, 1,2-diethyl- | 01615-80-1 | U086 |
| O,O-Diethyl S-methyl dithiophosphate | Phosphorodithioic acid, O,O-diethyl S-methyl ester | 03288-58-2 | U087 |
| Diethyl-p-nitrophenyl phosphate | Phosphoric acid, diethyl 4-nitrophenyl ester | 00311-45-5 | P041 |
| Diethyl phthalate | 1,2-Benzenedicarboxylic acid, diethyl ester | 00084-66-2 | U088 |
| O,O-Diethyl O-pyrazinyl phosphoro- thioate | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester | 00297-97-2 | P040 |
| Diethylstilbesterol | Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)- | 00056-53-1 | U089 |
| Dihydrosafrole | 1,3-Benzodioxole, 5-propyl- | 00094-58-6 | U090 |
| Diisopropylfluorophosphate (DFP) | Phosphorofluoridic acid, bis(1-methylethyl) ester | 00055-91-4 | P043 |
| Dimethoate | Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester | 00060-51-5 | P044 |
| 3,3'-Dimethoxybenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- | 00119-90-4 | U091 |
| p-Dimethylaminoazobenzene | Benzenamine, N,N-dimethyl-4-(phenylazo)- | 00060-11-7 | U093 |
| 7,12-Dimethylbenz[a]-anthracene | Benz[a]anthracene, 7,12-dimethyl- | 00057-97-6 | U094 |
| 3,3'-Dimethylbenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl- | 00119-93-7 | U095 |
| Dimethylcarbamoyl chloride | Carbamic chloride, dimethyl- | 00079-44-7 | U097 |
| 1,1-Dimethylhydrazine | Hydrazine, 1,1-dimethyl- | 00057-14-7 | U098 |
| 1,2-Dimethylhydrazine | Hydrazine, 1,2-dimethyl- | 00540-73-8 | U099 |
| alpha,alpha-Dimethylphenethylamine | Benzeneethanamine, alpha,alpha-dimethyl- | 00122-09-8 | P046 |
| 2,4-Dimethylphenol | Phenol, 2,4-dimethyl- | 00105-67-9 | U101 |
| Dimethyl phthalate | 1,2-Benzenedicarboxylic acid, dimethyl ester | 00131-11-3 | U102 |
| Dimethyl sulfate | Sulfuric acid, dimethyl ester | 00077-78-1 | U103 |
| Dimetilan | Carbamic acid, dimethyl-, 1-[(dimethylamino) carbonyl]-5-methyl-1H-pyrazol-3-yl ester | 644-64-4 | P191 |
| Dinitrobenzene, N.O.S.[1] | Benzene, dinitro- | 25154-54-5 | |
| 4,6-Dinitro-o-cresol | Phenol, 2-methyl-4,6-dinitro- | 00534-52-1 | P047 |
| 4,6-Dinitro-o-cresol salts | | | P047 |
| 2,4-Dinitrophenol | Phenol, 2,4-dinitro- | 00051-28-5 | P048 |
| 2,4-Dinitrotoluene | Benzene, 1-methyl-2,4-dinitro- | 00121-14-2 | U105 |
| 2,6-Dinitrotoluene | Benzene, 2-methyl-1,3-dinitro- | 00606-20-2 | U106 |
| Dinoseb | Phenol, 2-(1-methylpropyl)-4,6-dinitro- | 00088-85-7 | P020 |
| Di-n-octyl phthalate | 1,2-Benzenedicarboxylic acid, dioctyl ester | 00117-84-0 | U017 |
| Diphenylamine | Benzenamine, N-phenyl- | 00122-39-4 | |
| 1,2-Diphenylhydrazine | Hydrazine, 1,2-diphenyl- | 00122-66-7 | U109 |
| Di-n-propylnitrosamine | 1-Propanamine, N-nitroso-N-propyl- | 00621-64-7 | U111 |
| Disulfoton | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester | 00298-04-4 | P039 |
| Disulfiram | Thioperoxydicarbonic diamide, tetraethyl | 97-77-8 | U403 |

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| Dithiobiuret | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ | 00541-53-7 | P049 |
| Endosulfan | 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide | 00115-29-7 | P050 |
| Endothall | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid | 00145-73-3 | P088 |
| Endrin | 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)- | 00072-20-8 | P051 |
| Endrin metabolites | | | P051 |
| Epichlorohydrin | Oxirane, (chloromethyl)- | 00106-89-8 | U041 |
| Epinephrine | 1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)- | 00051-43-4 | P042 |
| EPTC | Carbamothioic acid, dipropyl-, S-ethyl ester | 759-94-4 | U390 |
| Ethyl carbamate (urethane) | Carbamic acid, ethyl ester | 00051-79-6 | U238 |
| Ethyl cyanide | Propanenitrile | 00107-12-0 | P101 |
| Ethyl Ziram | Zinc, bis(diethylcarbamodithioato-S,S')- | 14324-55-1 | U407 |
| Ethylenebisdithiocarbamic acid | Carbamodithioic acid, 1,2-ethanediylbis- | 00111-54-6 | U114 |
| Ethylenebisdithiocarbamic acid, salts and esters | | | U114 |
| Ethylene dibromide | Ethane, 1,2-dibromo- | 00106-93-4 | U067 |
| Ethylene dichloride | Ethane, 1,2-dichloro- | 00107-06-2 | U077 |
| Ethylene glycol monoethyl ether | Ethanol, 2-ethoxy- | 00110-80-5 | U359 |
| Ethyleneimine | Aziridine | 00151-56-4 | P054 |
| Ethylene oxide | Oxirane | 00075-21-8 | U115 |
| Ethylenethiourea | 2-Imidazolidinethione | 00096-45-7 | U116 |
| Ethylidene dichloride | Ethane, 1,1-dichloro- | 00075-34-3 | U076 |
| Ethyl methacrylate | 2-Propenoic acid, 2-methyl-, ethyl ester | 00097-63-2 | U118 |
| Ethyl methanesulfonate | Methanesulfonic acid, ethyl ester | 00062-50-0 | U119 |
| Famphur | Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester | 00052-85-7 | P097 |
| Ferbam | Iron, tris(dimethylcarbamodithioat-S,S')-, | 14484-64-1 | U396 |
| Fluoranthene | Same | 00206-44-0 | U120 |
| Fluorine | Same | 07782-41-4 | P056 |
| Fluoroacetamide | Acetamide, 2-fluoro- | 00640-19-7 | P057 |
| Fluoroacetic acid, sodium salt | Acetic acid, fluoro-, sodium salt | 00062-74-8 | P058 |
| Formaldehyde | Same | 00050-00-0 | U122 |
| Formetanate hydrochloride | Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)carbonyl]oxy]phenyl]-, monohydrochloride | 23422-53-9 | P198 |
| Formic acid | Same | 00064-18-6 | U123 |
| Formparanate | Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]-. | 17702-57-7 | P197 |
| Glycidylaldehyde | Oxiranecarboxyaldehyde | 00765-34-4 | U126 |
| Halomethanes, N.O.S.[1] | | | |
| Heptachlor | 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- | 00076-44-8 | P059 |
| Heptachlor epoxide | 2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- | 01024-57-3 | |
| Heptachlor epoxide (alpha, beta, and gamma isomers) | | | |
| Heptachlorodibenzofurans | | | |
| Heptachlorodibenzo-p-dioxins | | | |
| Hexachlorobenzene | Benzene, hexachloro- | 00118-74-1 | U127 |
| Hexachlorobutadiene | 1,3-Butadiene, 1,1,2,3,4,4-hexachloro- | 00087-68-3 | U128 |
| Hexachlorocyclopentadiene | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- | 00077-47-4 | U130 |
| Hexachlorodibenzo-p-dioxins | | | |
| Hexachlorodibenzofurans | | | |
| Hexachloroethane | Ethane, hexachloro- | 00067-72-1 | U131 |
| Hexachlorophene | Phenol, 2,2'-methylenebis[3,4,6-trichloro- | 00070-30-4 | U132 |
| Hexachloropropene | 1-Propene, 1,1,2,3,3,3-hexachloro- | 01888-71-7 | U243 |
| Hexaethyl tetraphosphate | Tetraphosphoric acid, hexaethyl ester | 00757-58-4 | P062 |
| Hydrazine | Same | 00302-01-2 | U133 |
| Hydrogen cyanide | Hydrocyanic acid | 00074-90-8 | P063 |
| Hydrogen fluoride | Hydrofluoric acid | 07664-39-3 | U134 |
| Hydrogen sulfide | Hydrogen sulfide $H_2S$ | 07783-06-4 | U135 |
| Indeno[1,2,3-cd]pyrene | Same | 00193-39-5 | U137 |

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| 3-Iodo-2-propynyl n-butylcarbamate | Carbamic acid, butyl-, 3-iodo-2-propynyl ester | 55406-53-6 | U375 |
| Isobutyl alcohol | 1-Propanol, 2-methyl- | 00078-83-1 | U140 |
| Isodrin | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro,(1alpha,4alpha,4abeta,5beta,8beta,8abeta)- | 00465-73-6 | P060 |
| Isolan | Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester | 119-38-0 | P192 |
| Isosafrole | 1,3-Benzodioxole, 5-(1-propenyl)- | 00120-58-1 | U141 |
| Kepone | 1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro- | 00143-50-0 | U142 |
| Lasiocarpine | 2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]- | 00303-34-1 | 4143 |
| Lead | Same | 07439-92-1 | |
| Lead compounds, N.O.S.[1] | | | |
| Lead acetate | Acetic acid, lead(2+) salt | 00301-04-2 | U144 |
| Lead phosphate | Phosphoric acid, lead(2+) salt (2:3) | 07446-27-7 | U145 |
| Lead subacetate | Lead, bis(acetato-O)tetrahydroxytri- | 01335-32-6 | U146 |
| Lindane | Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- | 00058-89-9 | U129 |
| Maleic anhydride | 2,5-Furandione | 00108-31-6 | U147 |
| Maleic hydrazide | 3,6-Pyridazinedione, 1,2-dihydro- | 00123-33-1 | U148 |
| Malononitrile | Propanedinitrile | 00109-77-3 | U149 |
| Manganese dimethyldithiocarbamate | Manganese, bis(dimethylcarbamodithioato-S,S')-, | 15339-36-3 | P196 |
| Melphalan | L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]- | 00148-82-3 | U150 |
| Mercury | Same | 07439-97-6 | U151 |
| Mercury compounds, N.O.S.[1] | | | |
| Mercury fulminate | Fulminic acid, mercury(2+) salt | 00628-86-4 | P065 |
| Metam Sodium | Carbamodithioic acid, methyl-, monosodium salt | 137-42-8 | U384 |
| Methacrylonitrile | 2-Propenenitrile, 2-methyl- | 00126-98-7 | U152 |
| Methapyrilene | 1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- | 00091-80-5 | U155 |
| Methiocarb | Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate | 2032-65-7 | P199 |
| Methomyl | Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester | 16752-77-5 | P066 |
| Metolcarb | Carbamic acid, methyl-, 3-methylphenyl ester | 1129-41-5 | P190 |
| Methoxychlor | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy- | 00072-43-5 | U247 |
| Methyl bromide | Methane, bromo- | 00074-83-9 | U029 |
| Methyl chloride | Methane, chloro- | 00074-87-3 | U045 |
| Methyl chlorocarbonate | Carbonochloridic acid, methyl ester | 00079-22-1 | U156 |
| Methyl chloroform | Ethane, 1,1,1-trichloro- | 00071-55-6 | U226 |
| 3-Methylcholanthrene | Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- | 00056-49-5 | U157 |
| 4,4'-Methylenebis (2-chloroaniline) | Benzenamine, 4,4'-methylenebis[2-chloro- | 00101-14-4 | U158 |
| Methylene bromide | Methane, dibromo- | 00074-95-3 | U068 |
| Methylene chloride | Methane, dichloro- | 00075-09-2 | U080 |
| Methyl ethyl ketone (MEK) | 2-Butanone | 00078-93-3 | U159 |
| Methyl ethyl ketone peroxide | 2-Butanone, peroxide | 01338-23-4 | U160 |
| Methyl hydrazine | Hydrazine, methyl- | 00060-34-4 | P068 |
| Methyl iodide | Methane, iodo- | 00074-88-4 | U138 |
| Methyl isocyanate | Methane, isocyanato- | 00624-83-9 | P064 |
| 2-Methyllactonitrile | Propanenitrile, 2-hydroxy-2-methyl- | 00075-86-5 | P069 |
| Methyl methacrylate | 2-Propenoic acid, 2-methyl-, methyl ester | 00080-62-6 | U162 |
| Methyl methanesulfonate | Methanesulfonic acid, methyl ester | 00066-27-3 | |
| Methyl parathion | Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester | 00298-00-0 | P071 |
| Methylthiouracil | 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- | 00056-04-2 | U164 |
| Mexacarbate | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) | 315-18-4 | P128 |
| Mitomycin C | Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balpha)]- | 00050-07-7 | U010 |
| MNNG | Guanidine, N-methyl-N'-nitro-N-nitroso- | 00070-25-7 | U163 |
| Molinate | 1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester | 2212-67-1 | U365 |
| Mustard gas | Ethane, 1,1'-thiobis[2-chloro- | 00505-60-2 | |
| Naphthalene | Same | 00091-20-3 | U165 |

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| 1,4-Naphthoquinone | 1,4-Naphthalenedione | 00130-15-4 | U166 |
| alpha-Naphthylamine | 1-Naphthalenamine | 00134-32-7 | U167 |
| beta-Naphthylamine | 2-Naphthalenamine | 00091-59-8 | U168 |
| alpha-Naphthylthiourea | Thiourea, 1-naphthalenyl- | 00086-88-4 | P072 |
| Nickel | Same | 07440-02-0 | |
| Nickel compounds, N.O.S.[1] | | | |
| Nickel carbonyl | Nickel carbonyl $Ni(CO)_4$, (T-4)- | 13463-39-3 | P073 |
| Nickel cyanide | Nickel cyanide $Ni(CN)_2$ | 00557-19-7 | P074 |
| Nicotine | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- | 00054-11-5 | P075 |
| Nicotine salts | | | P075 |
| Nitric oxide | Nitrogen oxide NO | 10102-43-9 | P076 |
| p-Nitroaniline | Benzenamine, 4-nitro- | 00100-01-6 | P077 |
| Nitrobenzene | Benzene, nitro- | 00098-95-3 | U169 |
| Nitrogen dioxide | Nitrogen oxide $NO_2$ | 10102-44-0 | P078 |
| Nitrogen mustard | Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl- | 00051-75-2 | |
| Nitrogen mustard, hydrochloride salt | | | |
| Nitrogen mustard N-oxide | Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide | 00126-85-2 | |
| Nitrogen mustard, N-oxide, hydrochloride salt | | | |
| Nitroglycerin | 1,2,3-Propanetriol, trinitrate | 00055-63-0 | P081 |
| p-Nitrophenol | Phenol, 4-nitro- | 00100-02-7 | U170 |
| 2-Nitropropane | Propane, 2-nitro- | 00079-46-9 | U171 |
| Nitrosamines, N.O.S.[1] | | 35576-91-1 | |
| N-Nitrosodi-n-butylamine | 1-Butanamine, N-butyl-N-nitroso- | 00924-16-3 | U172 |
| N-Nitrosodiethanolamine | Ethanol, 2,2'-(nitrosoimino)bis- | 01116-54-7 | U173 |
| N-Nitrosodiethylamine | Ethanamine, N-ethyl-N-nitroso- | 00055-18-5 | U174 |
| N-Nitrosodimethylamine | Methanamine, N-methyl-N-nitroso- | 00062-75-9 | P082 |
| N-Nitroso-N-ethylurea | Urea, N-ethyl-N-nitroso- | 00759-73-9 | U176 |
| N-Nitrosomethylethylamine | Ethanamine, N-methyl-N-nitroso- | 10595-95-6 | |
| N-Nitroso-N-methylurea | Urea, N-methyl-N-nitroso- | 00684-93-5 | U177 |
| N-Nitroso-N-methylurethane | Carbamic acid, methylnitroso-, ethyl ester | 00615-53-2 | U178 |
| N-Nitrosomethylvinylamine | Vinylamine, N-methyl-N-nitroso- | 04549-40-0 | P084 |
| N-Nitrosomorpholine | Morpholine, 4-nitroso- | 00059-89-2 | |
| N-Nitrosonornicotine | Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)- | 16543-55-8 | |
| N-Nitrosopiperidine | Piperidine, 1-nitroso- | 00100-75-4 | U179 |
| N-Nitrosopyrrolidine | Pyrrolidine, 1-nitroso- | 00930-55-2 | U180 |
| N-Nitrososarcosine | Glycine, N-methyl-N-nitroso- | 13256-22-9 | |
| 5-Nitro-o-toluidine | Benzenamine, 2-methyl-5-nitro- | 00099-55-8 | U181 |
| Octamethylpyrophosphoramide | Diphosphoramide, octamethyl- | 00152-16-9 | P085 |
| Osmium tetroxide | Osmium oxide $OsO_4$, (T-4)- | 20816-12-0 | P087 |
| Oxamyl | Ethanimidothioc acid, 2-(dimethylamino)-N-[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester | 23135-22-0 | P194 |
| Paraldehyde | 1,3,5-Trioxane, 2,4,6-trimethyl- | 00123-63-7 | U182 |
| Parathion | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester | 00056-38-2 | P089 |
| Pebulate | Carbamothioic acid, butylethyl-, S-propyl ester | 1114-71-2 | U391 |
| Pentachlorobenzene | Benzene, pentachloro- | 00608-93-5 | U183 |
| Pentachlorodibenzo-p-dioxins | | | |
| Pentachlorodibenzofurans | | | |
| Pentachloroethane | Ethane, pentachloro- | 00076-01-7 | U184 |
| Pentachloronitrobenzene (PCNB) | Benzene, pentachloronitro- | 00082-68-8 | U185 |
| Pentachlorophenol | Phenol, pentachloro- | 00087-86-5 | See F027 |
| Phenacetin | Acetamide, N-(4-ethoxyphenyl)- | 00062-44-2 | U187 |
| Phenol | Same | 00108-95-2 | U188 |
| Phenylenediamine | Benzenediamine | 25265-76-3 | |
| Phenylmercury acetate | Mercury, (acetato-O)phenyl- | 00062-38-4 | P092 |
| Phenylthiourea | Thiourea, phenyl- | 00103-85-5 | P093 |
| Phosgene | Carbonic dichloride | 00075-44-5 | P095 |
| Phosphine | Same | 07803-51-2 | P096 |
| Phorate | Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester | 00298-02-2 | P094 |
| Phthalic acid esters, N.O.S.[1] | | | |
| Phthalic anhydride | 1,3-Isobenzofurandione | 00085-44-9 | U190 |
| Physostigmine | Pyrrolo[2,3-b]indol-5-01, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)- | 57-47-6 | P204 |

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| Physostigmine salicylate | Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1) | 57-64-7 | P188 |
| 2-Picoline | Pyridine, 2-methyl- | 00109-06-8 | U191 |
| Polychlorinated biphenyls, N.O.S.[1] | | | |
| Potassium cyanide | Potassium cyanide K(CN) | 00151-50-8 | P098 |
| Potassium dimethyldithiocarbamate | Carbamodithioc acid, dimethyl, potassium salt | 128-03-0 | U383 |
| Potassium hyroxymethyl-n-methyl-dithiocarbamate | Carbamodithioc acid, (hydroxymethyl)methyl-, monopotassium salt | 51026-28-9 | U378 |
| Potassium n-methyldithiocarbamate | Carbamodithioc acid, methyl-monopotassium salt | 137-41-7 | U377 |
| Potassium pentachlorophenate | Pentachlorophenol, potassium salt | 7778736 | None |
| Potassium silver cyanide | Argentate(1-), bis(cyano-C)-, potassium | 00506-61-6 | P099 |
| Promecarb | Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate | 2631-37-0 | P201 |
| Pronamide | Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)- | 23950-58-5 | U192 |
| 1,3-Propane sultone | 1,2-Oxathiolane, 2,2-dioxide | 01120-71-4 | U193 |
| Propham | Carbamic acid, phenyl-, 1-methylethyl ester | 122-42-9 | U373 |
| Propoxur | Phenol, 2-(1-methylethoxy)-, methylcarbamate | 114-26-1 | U411 |
| n-Propylamine | 1-Propanamine | 00107-10-8 | U194 |
| Propargyl alcohol | 2-Propyn-1-ol | 00107-19-7 | P102 |
| Propylene dichloride | Propane, 1,2-dichloro- | 00078-87-5 | U083 |
| 1,2-Propylenimine | Aziridine, 2-methyl- | 00075-55-8 | P067 |
| Propylthiouracil | 4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo- | 00051-52-5 | |
| Prosulfocarb | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester | 52888-80-9 | U387 |
| Pyridine | Same | 00110-86-1 | U196 |
| Reserpine | Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-smethyl ester, (3beta,16beta,17alpha,18beta,20alpha)- | 00050-55-5 | U200 |
| Resorcinol | 1,3-Benzenediol | 00108-46-3 | U201 |
| Saccharin | 1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide | 00081-07-2 | U202 |
| Saccharin salts | | | U202 |
| Safrole | 1,3-Benzodioxole, 5-(2-propenyl)- | 00094-59-7 | U203 |
| Selenium | Same | 07782-49-2 | |
| Selenium compounds, N.O.S.[1] | | | |
| Selenium dioxide | Selenious acid | 07783-00-8 | U204 |
| Selenium sulfide | Selenium sulfide $SeS_2$ | 07488-56-4 | U205 |
| Selenium, tetrakis (dimethyl-dithiocarbamate | Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid | 144-34-3 | U376 |
| Selenourea | Same | 00630-10-4 | P103 |
| Silver | Same | 07440-22-4 | |
| Silver compounds, N.O.S.[1] | | | |
| Silver cyanide | Silver cyanide Ag(CN) | 00506-64-9 | P104 |
| Silvex (2,4,5-TP) | Propanoic acid, 2-(2,4,5-trichlorophenoxy)- | 00093-72-1 | See F027 |
| Sodium cyanide | Sodium cyanide Na(CN) | 00143-33-9 | P106 |
| Sodium dibutyldithiocarbamate | Carbamodithioic acid, dibutyl,sodium salt | 136-30-1 | U379 |
| Sodium diethyldithiocarbamate | Carbamodithioic acid, diethyl-, sodium salt | 148-18-5 | U381 |
| Sodium dimethyldithiocarbamate | Carbamodithioic acid, dimethyl-, sodium salt | 128-04-1 | U382 |
| Sodium pentachlorophenate | Pentachlorophenol, sodium salt | 131522 | None |
| Streptozotocin | D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)carbonyl]amino]- | 18883-66-4 | U206 |
| Strychnine | Strychnidin-10-one | 00057-24-9 | P108 |
| Strychnine salts | | | P108 |
| Sulfallate | Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester | 95-06-7 | U277 |
| TCDD | Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro- | 01746-01-6 | |
| Tetrabutylthiuram disulfide | Thioperoxydicarbonic diamide, tetrabutyl | 1634-02-2 | U402 |
| Tetrabutylthiuram monosulfide | Bis (dimethylthiocarbamoyl) sulfide | 97-74-5 | U401 |
| 1,2,4,5-Tetrachlorobenzene | Benzene, 1,2,4,5-tetrachloro- | 00095-94-3 | U207 |
| Tetrachlorodibenzo-p-dioxins | | | |
| Tetrachlorodibenzofurans | | | |
| Tetrachloroethane, N.O.S.[1] | Ethane, tetrachloro-, N.O.S | 25322-20-7 | |

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| 1,1,1,2-Tetrachloroethane | Ethane, 1,1,1,2-tetrachloro- | 00630-20-6 | U208 |
| 1,1,2,2-Tetrachloroethane | Ethane, 1,1,2,2-tetrachloro- | 00079-34-5 | U209 |
| Tetrachloroethylene | Ethene, tetrachloro- | 00127-18-4 | U210 |
| 2,3,4,6-Tetrachlorophenol | Phenol, 2,3,4,6-tetrachloro- | 00058-90-2 | See F027 |
| 2,3,4,6-tetrachlorophenol, potassium salt | same | 53535-27-6 | None |
| 2,3,4,6-tetrachlorophenol, sodium salt | same | 25567-55-9 | None |
| Tetraethyldithiopyrophosphate | Thiodiphosphoric acid, tetraethyl ester | 03689-24-5 | P109 |
| Tetraethyl lead | Plumbane, tetraethyl- | 00078-00-2 | P110 |
| Tetraethyl pyrophosphate | Diphosphoric acid, tetraethyl ester | 00107-49-3 | P111 |
| Tetranitromethane | Methane, tetranitro- | 00509-14-8 | P112 |
| Thallium | Same | 07440-28-0 | |
| Thallium compounds, N.O.S.[1] | | | |
| Thallic oxide | Thallium oxide $Tl_2O_3$ | 01314-32-5 | P113 |
| Thallium(I) acetate | Acetic acid, thallium(1+) salt | 00563-68-8 | U214 |
| Thallium(I) carbonate | Carbonic acid, dithallium(1+) salt | 06533-73-9 | U215 |
| Thallium(I) chloride | Thallium chloride TlCl | 07791-12-0 | U216 |
| Thallium(I) nitrate | Nitric acid, thallium(1+) salt | 10102-45-1 | U217 |
| Thallium selenite | Selenious acid, dithallium(1+) salt | 12039-52-0 | P114 |
| Thallium(I) sulfate | Sulfuric acid, dithallium(1+) salt | 07446-18-6 | P115 |
| Thioacetamide | Ethanethioamide | 00062-55-5 | U218 |
| Thiodicarb | Ethanimidothioic acid, N,N'-[thiobis [(methylimino) carbonyloxy]] bis-, dimethyl ester | 59669-26-0 | U410 |
| Thiofanox | 2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime | 39196-18-4 | P045 |
| Thiomethanol | Methanethiol | 00074-93-1 | U153 |
| Thiophanate-methyl | Carbamic acid, [1,2-phyenylenebis (iminocarbonothioyl)] bis-, dimethyl ester | 23564-05-8 | U409 |
| Thiophenol | Benzenethiol | 00108-98-5 | P014 |
| Thiosemicarbazide | Hydrazinecarbothioamide | 00079-19-6 | P116 |
| Thiourea | Same | 00062-56-6 | U219 |
| Thiram | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl- | 00137-26-8 | U244 |
| Tirpate | 1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl] oxime | 26419-73-8 | P185 |
| Toluene | Benzene, methyl- | 00108-88-3 | U220 |
| Toluenediamine | Benzenediamine, ar-methyl- | 25376-45-8 | U221 |
| Toluene-2,4-diamine | 1,3-Benzenediamine, 4-methyl- | 00095-80-7 | |
| Toluene-2,6-diamine | 1,3-Benzenediamine, 2-methyl- | 00823-40-5 | |
| Toluene-3,4-diamine | 1,2-Benzenediamine, 4-methyl- | 00496-72-0 | |
| Toluene diisocyanate | Benzene, 1,3-diisocyanatomethyl- | 26471-62-5 | U223 |
| o-Toluidine | Benzenamine, 2-methyl- | 00095-53-4 | U328 |
| o-Toluidine hydrochloride | Benzenamine, 2-methyl-, hydrochloride | 00636-21-5 | U222 |
| p-Toluidine | Benzenamine, 4-methyl- | 00106-49-0 | U353 |
| Toxaphene | Same | 08001-35-2 | P123 |
| Triallate | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester | 2303-17-5 | U389 |
| 1,2,4-Trichlorobenzene | Benzene, 1,2,4-trichloro- | 00120-82-1 | |
| 1,1,2-Trichloroethane | Ethane, 1,1,2-trichloro- | 00079-00-5 | U227 |
| Trichloroethylene | Ethene, trichloro- | 00079-01-6 | U228 |
| Trichloromethanethiol | Methanethiol, trichloro- | 00075-70-7 | P118 |
| Trichloromonofluoromethane | Methane, trichlorofluoro- | 00075-69-4 | U121 |
| 2,4,5-Trichlorophenol | Phenol, 2,4,5-trichloro- | 00095-95-4 | See F027 |
| 2,4,6-Trichlorophenol | Phenol, 2,4,6-trichloro- | 00088-06-2 | See F027 |
| 2,4,5-T | Acetic acid, (2,4,5-trichlorophenoxy)- | 00093-76-5 | See F027 |
| Trichloropropane, N.O.S.[1] | | 25735-29-9 | |
| 1,2,3-Trichloropropane | Propane, 1,2,3-trichloro- | 00096-18-4 | |
| Triethylamine | Ethanamine, N,N-diethyl- | 121-44-8 | U404 |
| O,O,O-Triethyl phosphorothioate | Phosphorothioic acid, O,O,O-triethyl ester | 00126-68-1 | |
| 1,3,5-Trinitrobenzene | Benzene, 1,3,5-trinitro- | 00099-35-4 | U234 |
| Tris(1-aziridinyl)phosphine sulfide | Aziridine, 1,1',1''-phosphinothioylidynetris- | 00052-24-4 | |
| Tris(2,3-dibromopropyl) phosphate | 1-Propanol, 2,3-dibromo-, phosphate (3:1) | 00126-72-7 | U235 |
| Trypan blue | 2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]- bis[5-amino-4-hydroxy-, tetrasodium salt. | 00072-57-1 | U236 |
| Uracil mustard | 2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]- | 00066-75-1 | U237 |
| Vanadium pentoxide | Vanadium oxide $V_2O_5$ | 01314-62-1 | P120 |
| Vernolate | Carbamothioc acid, dipropyl-, S-propyl ester | 1929-77-7 | U385 |

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| Vinyl chloride | Ethene, chloro- | 00075-01-4 | U043 |
| Warfarin | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3% | 00081-81-2 | U248 |
| Warfarin | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3% | 00081-81-2 | P001 |
| Warfarin salts, when present at concentrations less than 0.3% | | | U248 |
| Warfarin salts, when present at concentrations greater than 0.3% | | | P001 |
| Zinc cyanide | Zinc cyanide $Zn(CN)_2$ | 00557-21-1 | P121 |
| Zinc phosphide | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10% | 01314-84-7 | P122 |
| Zinc phosphide | Zinc phosphide $Zn_3P_2$, when present at concentrations of 10% or less | 01314-84-7 | U249 |
| Ziram | Zinc, bis(dimethylcarbamodithioato-S,S')-, (T-4)- | 137-30-4 | P205 |

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

SECTION 66. NR 605 Appendix V is created to read:

## Chapter NR 605
## Appendix V
## Mercury Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units

These are exempt mercury-bearing materials with less than 500 ppm of ch. NR 605 Appendix IV organic constituents when generated by manufacturers or users of mercury or mercury products.

1. Activated carbon
2. Decomposer graphite
3. Wood
4. Paper
5. Protective clothing
6. Sweepings
7. Respiratory cartridge filters
8. Cleanup articles
9. Plastic bags and other contaminated containers
10. Laboratory and process control samples
11. K106 and other wastewater treatment plant sludge and filter cake
12. Mercury cell sump and tank sludge
13. Mercury cell process solids
14. Recoverable levels or mercury contained in soil

SECTION 67. NR 610.05(4) is amended to read:

NR 610.05(4) If the waste is determined to be a hazardous waste, the generator shall refer to chs. NR 600 to ~~685~~ 690 for possible exclusions or restrictions pertaining to management of that specific waste.

SECTION 68. NR 610.05(4) is amended to read:

NR 610.05(4) If the waste is determined to be a hazardous waste, the generator shall refer to chs. NR 600 to ~~685~~ 690 for possible exclusions or restrictions pertaining to management of that specific waste.

SECTION 69. NR 610.07(1)(c)1.f. is amended to read:

NR 610.07(1)(c)1.f. Treat the waste prior to beneficial use, reuse, legitimate recycling or reclamation~~.~~ ; or

SECTION 70. NR 610.07(1)(c)1.g. is created to read:

NR 610.07(1)(c)1.g. If the facility is managing a waste that is a universal waste, deliver the waste to a universal waste handler or destination facility subject to the requirements of ch. NR 690.

SECTION 71. NR 610.07(1)(c)2.c. is amended to read:

NR 610.07(1)(c)2.c. Be a licensed solid waste disposal facility which has been approved by the department to accept hazardous wastes from very small quantity generators~~.~~ ; or

Note: The specific requirements for landfills accepting hazardous wastes from very small quantity generators is contained in s. NR 506.15.

Note: The publications containing the CFR references and Title 42 of the United States Code may be obtained from:

~~The~~ Superintendent of Documents
U.S. Government Printing Office
~~Washington, D.C. 20402~~
P.O. Box 371954
Pittsburgh, PA 15250-7954
(202) 512-1800

SECTION 72. NR 610.07(1)(c)2.d. is created to read:

NR 610.07(1)(c)2.d. If the facility is managing a waste that is a universal waste, deliver the waste to a universal waste handler or destination facility subject to the requirements of ch. NR 690.

SECTION 73. NR 610.07(1)(d) is amended to read:

NR 610.07(1)(d) The very small quantity generator shall comply with the manifest requirements of ~~s.~~ ss. NR 615.08 and 615.11(2), if the generator uses the manifest.

SECTION 74. NR 610.07(1m) is created to read:

NR 610.07(1m) SPECIAL REQUIREMENTS FOR HAZARDOUS WASTE GENERATED BY VERY SMALL QUANTITY GENERATORS. When making the quantity determinations of this section, the generator shall include all hazardous waste that it generates, except hazardous waste that is any of the following:

(a) Exempt from regulation under ss. NR 605.05(2) to (5), 605.05(1)(b), 605.06(1) and 605.13.

(b) Managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities.

(c) Recycled, without prior storage or accumulation, only in an on-site process subject to regulation under s. NR 625.04(4).

(d) Used oil managed under the requirements of s. NR 605.05(1)(q) and ch. NR 590.

(e) Spent lead-acid batteries managed under the requirements of s. NR 625.12.

(f) Universal waste managed under ch. NR 690.

SECTION 75. The second and third notes in s. NR 610.07(2) are repealed.

SECTION 76. NR 610.07(3)(f) is amended to read:

NR 610.07(3)(f) The very small quantity generator shall mark each container or tank with the words "HAZARDOUS WASTE" or other words that identify the contents ~~of the containers~~ as hazardous waste.

SECTION 77. NR 610.08(1)(d) and (2)(b) are amended to read:

NR 610.08(1)(d) Manifest system. Small quantity generators shall comply with the manifest requirements specified in ~~s.~~ ss. NR 615.08 and 615.11(2).

(2)(b) A small quantity generator who stores waste in a satellite accumulation area in accordance with this section shall be exempt from the accumulation periods specified in sub. (1) ~~(l)~~ (n).

SECTION 78. NR 615.05(3)(a)1., 2.b. and (b), (4)(a)2.(intro.), and 2.a., 3.(intro.) and (c)(intro.) are amended to read:

NR 615.05(3)(a)1. Store, treat, dispose or recycle all hazardous waste in an on-site hazardous waste facility or recycling facility which has received an operating license, interim license, variance or waiver, or is exempt from licensing under sub. (4) or (5), or under s. NR ~~630.04(1) to (16)~~ 630.04; or

2.b. Has been issued an operating license as a hazardous waste facility under chs. NR 600 to 685, or has an interim license, variance, waiver, or exemption from licensing under s. NR ~~630.04(1) to (16)~~ 630.04.

(b) If the generator sends the hazardous waste to an on-site hazardous waste facility or an off-site hazardous waste facility within Wisconsin which the generator owns or operates, the generator shall comply with the requirements of chs. NR 600 to 685, except as provided in subs. (4) and (5) and s. NR ~~630.04(1) to (16)~~ 630.04.

(4)(a)2.(intro.) If the waste is placed in containers, the generator shall comply with the container requirements in ss. NR 633.09, 640.08 to 640.12, 640.14 and 640.15. In addition, the generator is exempt from the closure and long-term care requirements of s. NR 685.05, except subs. (1) and (8), and ss. NR 685.06 and 685.07. The generator shall meet the following requirements:

2.a. The generator shall comply with the packaging, labeling, marking and placarding requirements in s. NR ~~615.09~~ 615.10.

3.(intro.) If the waste is placed in tanks, the generator shall comply with the tank system requirements of ch. NR 645, except the provisions of ss. NR 633.07, 645.06, 645.15, 645.16 and 645.17(1)(a)3. In addition, a generator is exempt from the closure and long-term care requirements of s. NR 685.05, except subs. (1) and (8), and ss. NR 685.06 and 685.07. The generator shall meet the following requirements:

(c)(intro.) Satellite accumulation. A generator without a storage license may accumulate as much as 55 gallons of hazardous waste or one quart of acutely hazardous waste listed in s. NR 605.09(2)(a), table II or (b), Table III, or identified in s. NR 605.09(3)(b), table IV in containers at or near any point of generation under the control of the generator of the waste where wastes initially accumulate if the following requirements are met:

SECTION 79. NR 615.06(6) is amended to read:

NR 615.06(6) If the waste is determined to be a hazardous waste, the generator shall refer to chs. NR 600 to ~~685~~ 690 for possible exclusions pertaining to the management of the generator's specific waste.

SECTION 80. NR 615.12(1)(intro.) and (1t)(g) are amended to read:

NR 615.12(1)(intro.) The primary exporter shall notify the department and the EPA administrator in writing 60 days before the initial shipment of hazardous waste to each country in each calendar year. This notification may cover export activity that extends over a 12 month or lesser period. Notices sent to the EPA administrator shall be sent to:

Office of ~~Waste Program~~ Enforcement and Compliance Assurance
~~RCRA Enforcement Division (05-520)~~
Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Hand-delivered notifications should be sent to:

Office of Enforcement and Compliance Assurance,
Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A),
Environmental Protection Agency,
Ariel Rios Bldg.,
12th St. and Pennsylvania Ave., NW.,
Washington, D.C.

~~with~~ In both cases, the phrase "Attention: Notification of Intent to Export" shall be prominently displayed on the front of the envelope.

(1t)(g) Reports shall be sent to both the Environmental Protection Agency (EPA) and the department. Reports sent to EPA shall be sent to the following address: ~~Waste Programs~~ Office of Enforcement and Compliance Assurance, ~~RCRA~~ Office of Compliance, Enforcement ~~Division (OS-520)~~ Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, or hand-delivered to: Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, Ariel Rios Bldg., 12th St. and Pennsylvania Ave., NW., Washington, D.C. ~~and~~ Reports shall also be sent to: Wisconsin Department of Natural Resources, Bureau of Solid and Hazardous Waste Management, P.O. Box 7921, Madison, WI 53707.

SECTION 81. NR 615.14 is created to read:

NR 615.14 INTERNATIONAL AGREEMENTS. (1) Any person who exports or imports hazardous waste subject to the manifest requirements of ss. NR 610.08(1)(d) and 615.08, or subject to the universal waste management standards of ch. NR 690, to or from designated member countries of the Organization for Economic Cooperation and Development (OECD) for purposes of recovery is subject to 40 CFR part 262 subpart H. The requirements of ss. NR 615.12 and 615.13 do not apply.

(a) For the purposes of this section and 40 CFR part 262 subpart H, the designated OECD countries consist of Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.

(b) For the purposes of this section and 40 CFR part 262 subpart H, Canada and Mexico are considered OECD member countries only for the purpose of transit.

(2) Notwithstanding sub. (1), ss. NR 615.12 and 615.13 apply to both of the following:

(a) Any person who exports hazardous waste to or imports hazardous waste from a designated OECD member country for purposes other than recovery.

Note: Purposes other than recovery include incineration and disposal.

(b) Any person who exports hazardous waste to or imports hazardous waste from Mexico or Canada for any purpose.

SECTION 82. NR 620.05(5) is created to read:

NR 620.05(5) A transporter of hazardous waste subject to the manifesting requirements of ss. NR 610.08(1)(d) and 615.08, or subject to the waste management standards of ch. NR 690, that is being imported from or exported to any of the countries listed in s. NR 615.14(1) for purposes of recovery is subject to this section and s. NR 615.13 and to 40 CFR part 262 subpart H.

SECTION 83. NR 620.07(2)(a) is amended to read:

NR 620.07(2)(a) In the case of exports other than those subject to 40 CFR part 262 subpart H, a transporter may not accept hazardous waste from a primary exporter if the transporter knows that the shipment does not conform to the EPA acknowledgement of consent.

SECTION 84. NR 620.14(7) and (8) are amended to read:

NR 620.14(7) The transporter shall comply with the contingency plan and emergency procedures in ~~ss. NR 630.21 and~~ s. NR 630.22, ~~and~~ the preparedness and prevention requirements in s. NR 630.21, and the personnel training requirements in s. NR 630.16. The training program under this subsection shall be included in the training program under s. NR 620.13.

(8) The transporter shall comply with the recordkeeping~~,~~ and operating record ~~and reporting~~ requirements in ~~ss.~~ s. NR 630.31 ~~and 630.40~~, except for the requirements in s. NR 630.31(1)(f), (g), (h) and (i).

SECTION 85. NR 625.02(3)(Note) is created to read:

NR 625.02(3)(Note) In addition to the requirements of this chapter, hazardous waste burned in boilers and industrial furnaces is also subject to regulation under 40 CFR part 266 subpart H. Besides applying to certain hazardous waste burned for energy recovery, those federal requirements also apply to hazardous waste processed in boilers and industrial furnaces for materials recovery or as an ingredient. Examples of industrial furnaces that can be used for hazardous waste processing for materials recovery or as an ingredient include smelting, melting and refining furnaces, including pyrometallurgical devices such as cupulas, sintering machines, roasters, and foundry furnaces.

SECTION 86. NR 625.04(1)(intro.), (a), (b)(intro.) and 3. are amended to read:

NR 625.04 GENERAL. (1)(intro.) Except as provided in s. NR 625.05, the owner or operator of a hazardous waste recycling facility that meets the requirements of this chapter may be exempted from all of the requirements of ~~s. NR 600.04 and~~ chs. NR 630 to 685, except ch. NR 680, except those requirements specifically made applicable in this chapter, in one of 2 ways:

(a) The owner or operator of a recycling facility that meets the requirements of s. NR 625.06 is exempt from regulation under ~~s. NR 600.04 and~~ chs. NR 630 to 685 and is not required to apply for a written exemption under this chapter.

(b)(intro.) The owner or operator of a recycling facility that is not exempt under s. NR 625.06 may apply to the department for a written exemption from regulation under s. NR 600.04 and chs. NR 630 to 685. The following provisions apply to the owner or operator of a recycling facility who applies for a written exemption from the requirements of ~~s. NR 600.04~~ and chs. NR 630 to 685 under s. NR 625.07, 625.08 or 625.09:

3. The owner or operator of a proposed recycling facility may request an exemption under this section from certain requirements of ~~s. NR 600.04 and~~ chs. NR 630 to 685 for the proposed recycling activities. The owner or operator of a proposed recycling facility may not construct or operate the facility until the department approves the exemption request in writing.

SECTION 87. NR 625.04(8) is created to read:

NR 625.04(8) Hazardous waste that is exported to or imported from the designated member countries of the Organization for Economic Cooperation and Development (OECD) listed in s. NR 615.14 for purpose of recovery is subject to the requirements of 40 CFR part 262, subpart H, if it is subject to either the manifesting requirements of s. NR 610.08(1)(d) or 615.08 or to the universal waste management standards of ch. NR 690.

SECTION 88. NR 625.06(intro.) is amended to read:

NR 625.06(intro.) LEGITIMATE RECOVERY OR RECLAMATION. The legitimate recovery or reclamation of hazardous waste is exempt from regulation under ~~s. NR 600.04 and~~ chs. NR 630 to 685, except for certain units that perform recovery or reclamation, which may be exempt from regulation under ~~s. NR 600.04 and~~ chs. NR 630 to 685 if they meet the definition of a totally enclosed treatment facility.

Note: An example of a totally enclosed treatment facility is an enclosed still which is directly connected to a process that produces waste for recovery in the still.

SECTION 89. NR 625.07(7)(a)5. is amended to read:

NR 625.07(7)(a)5. A description of how compliance with the requirements of par. ~~(b)~~ (c) will be accomplished, including a copy of the facility's contingency plan as required under ss. NR 630.21 and 630.22 and a description of how the facility will close in accordance with s. NR 625.04 (6). These descriptions are not required for facilities which burn hazardous waste for energy recovery in a boiler or industrial furnace in amounts less than 1,000 kilograms per month, if the hazardous waste burned exhibits only the characteristic of ignitability, and no other characteristic listed in s. NR 605.08 (1) to (5), or is listed under s. NR 605.09 solely because it exhibits the characteristic of ignitability.

SECTION 90. NR 625.08(intro.) is amended to read:

NR 625.08(intro.) BENEFICIAL USE OR REUSE. Beneficial use or reuse of a hazardous waste may be exempted from regulation under ~~s. NR 600.04 and~~ chs. NR 630 to 685. To be considered for this exemption, the owner or operator of the facility shall submit a written request to the department in accordance with s. NR 625.04(1)(b).

SECTION 91. NR 625.09 is amended to read:

NR 625.09 OTHER ACTIVITIES. Other recycling activities not specifically eligible for an exemption under ss. NR 625.06, 625.07 and 625.08 may also be exempted by the department from certain requirements of ~~s. NR 600.04 and~~ chs. NR 630 to 685. Owners or

operators of the recycling facilities shall make a request to the department, in writing, for an exemption. The request shall be made in accordance with s. NR 625.04(1)(b) and shall contain the minimum information specified in s. NR 625.07(7)(a).

SECTION 92. NR 625.10 is amended to read:

NR 625.10 SPECIAL REQUIREMENTS. The department may require the owner or operator of any recycling facility which is otherwise exempt under this chapter to comply with all or part of the requirements of ~~s. NR 600.04 and~~ chs. NR 630 to 685, under s. NR 600.07, where compliance with the requirements is necessary to protect public health, safety or the environment.

SECTION 93. NR 625.12(1)(a), (2)(intro.) and (3)(a) are amended to read:

NR 625.12(1)(a) Persons who generate, transport or store waste lead-acid batteries destined for recycling but do not recycle them, other than spent batteries that are to be regenerated, are not subject to regulation under chs. NR 600 to 685, except as provided in this section:

(2)(intro.) Owners or operators of lead-acid battery recycling facilities storing waste lead-acid batteries at the recycling facility before recycling them, other than spent batteries that are to be regenerated, are subject to the applicable requirements of chs. NR 600 to 685 for that storage, except that they are exempt from the waste analysis requirements of ss. NR 630.12 and 630.13 (1), and the manifest requirements of s. NR 630.30.

(3)(a) The department may require the owner or operator of any facility managing waste lead-acid batteries which is otherwise exempt under this chapter to comply with all or part of the requirements of ~~s. NR 600.04 and~~ chs. NR 630 to 685 under s. NR 600.07 (1), where compliance with the requirements is necessary to protect public health, safety or the environment.

SECTION 94. NR 630.01 is amended to read:

NR 630.01 PURPOSE. The purpose of this chapter is to specify the general requirements that apply to the storage, treatment and disposal of hazardous waste.

SECTION 95. NR 630.04(3)(c), (11), and (14) are amended to read:

NR 630.04(3)(c) Comply with all the requirements of s. NR ~~660.19~~ 660.24.

(11) A generator who combines absorbent material with a waste generated on-site in a container for the purpose of eliminating free liquids, if the generator complies with s. NR ~~615.05(6)~~ 615.05(5).

(14) The owner or operator of a solid waste disposal facility licensed under chs. NR 500 to ~~522~~ 524, if s. NR 605.05(1) to (4) excludes the only hazardous waste the facility ~~stores is excluded~~ manages from regulation under ~~s. NR 600.04 and~~ chs. NR 630 to 685 by s. NR 610.05 (1) and the facility has been approved under ~~s. NR 506.15~~ ch. NR 506 to accept ~~accept small quantities of hazardous waste~~ these wastes.

SECTION 96. NR 630.04(16) to (18) are created to read:

NR 630.04(16) The owner or operator of an elementary neutralization unit or a POTW, provided that if the owner or operator is diluting hazardous ignitable (D001) wastes, other than the D001 High TOC Subcategory defined in s. NR 675.20, Table Treatment Standards for Hazardous Wastes, or reactive (D003) waste, to remove the characteristic before land disposal, the owner or operator shall comply with the requirements in s. NR 630.17(2).

(17) Universal waste handlers and universal waste transporters handling universal wastes. These handlers are subject to regulation under ch. NR 690, when handling universal wastes.

(18) A person accumulating waste in tanks or containers in accordance with subs. (4), (9) and (10) may treat the waste in the accumulation tank or container within the requirements of chs. NR 610, 615, 633, 640 and 645.

Note: This subsection exempts the facility from the provisions of ch. NR 630 only. It does not allow any method of treatment otherwise restricted or prohibited, and it does not exempt the facility from any other requirements in chs. NR 600 to 690, or any department rules applicable to solid waste management, air pollution control, or water pollution control, or other department rules.

SECTION 97. NR 630.10(1m) is created to read:

NR 630.10(1m) The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to 40 CFR part 262, subpart H shall provide a copy of the tracking document bearing all required signatures to the notifier to EPA and to the competent authorities of all other concerned countries within 3 working days of receipt of the shipment. The original of the signed tracking document shall be maintained at the facility for at least 3 years. The copy of the tracking document to be sent to EPA shall be sent to:

Office of Enforcement and Compliance Assurance
Office of Compliance, Enforcement Planning
Targeting and Data Division (2222A)

Environmental Protection Agency
401 M St., S.W.
Washington, D.C. 20460

SECTION 98. NR 630.13(1)(f) is amended to read:

NR 630.13(1)(f) Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in ss. NR ~~630.17(2)~~ 630.17(3), 631.07(4), 632.08(4), 633.06, 645.06(3)(b)2., 655.09, ~~660.13(5) and (7)~~ 660.18(6) to (9), 665.06(1)(d) and (2), ~~665.09(15)~~ 665.09(14) and (15) and 670.11(2)(a).

SECTION 99. NR 630.13(1)(i) is created to read:

NR 630.13(1)(i) For owners and operators seeking an exemption to the air emission standards of ch. NR 633 in accordance with s. NR 633.05:

1. If direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption.

2. If knowledge of the waste is used for the waste determination, any information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from off-site, that is used as the basis for knowledge of the waste.

SECTION 100. NR 630.15(2)(d) is amended to read:

NR 630.15(2)(d) The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use. At a minimum, the inspection schedule shall include the items and frequencies called for in ~~chs.~~ ch. NR 630, ~~640, 645, 655, 660, 665 and 670,~~ and ss. NR 631.06(2), 632.06(1), (2) and (7), 633.11, 633.14, 640.12(1), 645.09, 645.11, 655.08, 660.18(13), (31)(b), (32), 665.11 and 670.09 where inspection requirements are specified.

SECTION 101. NR 630.20(2)(c) is created to read:

NR 630.20(2)(c) For exports of hazardous waste subject to the requirements of subpart H of 40 CFR part 262, a transporter may not accept hazardous waste without a tracking document that includes all information required by 40 CFR 262.84.

SECTION 102. NR 630.22(2)(a)2. and the first Note in (2)(a)5.f. are amended to read:

NR 630.22(2)(a)2. Telephone the division of emergency government and comply with the requirements of s. ~~144.76~~ 292.11, Stats.~~, ch. NR 158,~~ and ~~if the discharge of hazardous waste is from an underground storage tank system, the reporting requirements of~~ ch. NR ~~705~~ 706.

5.f.Note. The division of emergency government's 24-hour toll-free telephone number is ~~(608) 266-3232~~ 1-800-943-0003. ~~Collect calls are accepted.~~

SECTION 103. NR 630.30(5m) is created to read:

NR 630.30(5m) Within 3 working days of the receipt of a shipment subject to 40 CFR part 262, subpart H, the owner or operator of the facility shall provide a copy of the tracking document bearing all required signatures to the notifier, to EPA, to the department, and to competent authorities of all other concerned countries. The original copy of the tracking document shall be maintained at the facility for at least 3 years from the date of signature.

Note: The copy of the tracking document to be sent to EPA shall be sent to:

Office of Enforcement and Compliance Assurance
Office of Compliance, Enforcement Planning
Targeting and Data Division (2222A)
Environmental Protection Agency
401 M St., S.W.
Washington, D.C. 20460

SECTION 104. NR 630.31(1)(d) and (h) are amended to read:

NR 630.31(1)(d) Records and results of waste analyses performed as specified in ss. NR 630.12, ~~and~~ 630.13(1), 630.17, 631.07, 632.08, 633.06, 660.16(6), (7) and (9), 665.06(1)(d) and (2), 665.09(14), 675.04 and 675.07;

(h) Monitoring, testing or analytical data, and corrective action where required by ss. NR 631.07(3) to (6), 631.08, 632.08(4) to (9), 632.09, 633.11, 633.12, 633.14, 640.06, 640.13(3), 645.07, 645.09(3) to (11), 645.11, 655.08, 660.14 660.18(13), (14), (31)(b) and (32), ~~and~~ 665.09(10), 665.11 and 670.09 and chs. NR 635 and 645.

SECTION 105. NR 630.40(3)(c) is amended to read:

NR 630.40(3)(c) As otherwise required by chs. NR 631, 632, 633, 635, 655 and 660, or by a license, variance or plan approval for surface impoundments, waste piles, landfills and other sites or facilities where the department may require additional information.

SECTION 106. NR 631.02(2)(b) is amended to read:

NR 631.02(2)(b) ~~Hazardous~~ Units, including hazardous waste recycling units, that are not exempt from licensing under the provisions of s. NR 615.05(4) and that are located on hazardous waste management facilities otherwise subject to the licensing requirements of ch. NR 680.

Note: A unit that is exempt from licensing under s. NR 615.05(4) refers to a 90-day tank or container.

SECTION 107. NR 631.06(2)(a)2. and (f)2.f. are amended to read:

NR 631.06(2)(a)2. The owner or operator of a facility in existence on or before December 21, 1990, who cannot install a closed-vent system and control device to comply with the provisions of this chapter on the date that the facility becomes subject to this chapter shall prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls shall be installed as soon as possible, but the implementation schedule may allow up to ~~18~~ 30 months after the date that the facility becomes subject to this chapter for installation and startup.

(f)2.f. For a condenser, ~~either a monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or~~ a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature ~~at 2 locations and have~~ with an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5 °C, whichever is greater. ~~One~~ The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser~~, and a second temperature sensor shall be installed at a location in the coolant fluid exiting the condenser~~ exit.

Note: The condenser exit is the product side.

SECTION 108. NR 631.06(2)(k)(intro.) is created to read:

NR 631.06(2)(k) A closed-vent system shall meet either of the following design requirements:

SECTION 109. NR 631.06(2)(k) is amended to read:

NR 631.06(2)(k)1. Closed-vent systems shall be designed for and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background ~~and by visual inspections,~~ as determined by the methods specified as s. NR 631.07(2) and by visual inspections.

2. Closed-vent systems shall be ~~monitored to determine compliance with this section during the initial leak detection monitoring, which shall be conducted by the date that the facility becomes subject to this section, annually, and at other times as requested by the department~~ designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

SECTION 110. NR 631.06(2)(l) is renumbered NR 631.06(2)(m).

SECTION 111. NR 631.06(2)(l), (n) and (o) are created to read:

NR 631.06(2)(l) The owner or operator shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

1. Each closed-vent system that is used to comply with par. (k)1. shall be inspected and monitored in accordance with the following requirements:

a. An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in s. NR 631.07(2) to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

b. After initial leak detection monitoring required in subd. 1.a., the owner or operator shall inspect and monitor the closed-vent system. Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in s. NR 631.07(2) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is unsealed. Closed-vent system components or connections other than those that are permanently or semi-permanently sealed shall be monitored annually and at other times as requested by the department, except as provided for in par. (o), using the procedures specified in s. NR 631.07(2) to demonstrate that the components or connections operate with no detectable emissions.

Note: Examples of closed-vent system joints, seams or other connections that are permanently or semi-permanently sealed include a welded joint between 2 sections of hard piping or a bolted and gasketed ducting flange. An example of "any time the component is repaired or replaced" would be an instance when a section of damaged hard piping is replaced with new hard piping. An example of an occasion when the connection is unsealed would be an occasion when a flange is unbolted.

c. In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of subd. 3.

d. The owner or operator shall maintain a record of the inspection and monitoring in accordance with s. NR 631.08.

2. Each closed-vent system that is used to comply with par. (k)2. shall be inspected and monitored in accordance with the following requirements:

a. The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes or gaps in ductwork or piping or loose connections.

b. The owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year.

c. In the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of subd. 3.

d. The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in s. NR 631.08.

3. The owner or operator shall repair all detected defects as follows:

a. Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in subd. 3.

b. A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

c. Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

d. The owner or operator shall maintain a record of the defect repair in accordance with s. NR 631.08.

(n) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

1. Regenerated or reactivated in a thermal treatment unit that meets one of the following requirements:

a. The owner or operator of the unit has been issued an operating license under s. NR 680.32 which implements the requirements of ch. NR 670.

b. The unit is equipped with and is operating air emission controls in accordance with the applicable requirements of this chapter and ch. NR 633.

c. The unit is equipped with and is operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

2. Incinerated in a hazardous waste incinerator for which the owner or operator has met one of the following conditions:

a. Has been issued an operating license under s. NR 680.32 which implements the requirements of ch. NR 665.

b. Has designed and operates the incinerator in compliance with the interim status requirements of s. NR 680.22(29).

3. Burned in a boiler or industrial furnace for which the owner or operator has met one of the following requirements:

a. Has been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 266 subpart H.

b. Has designed and operates the boiler or industrial furnace in compliance with the interim status requirements of 40 CFR part 266, subpart H.

(o) Any components of a closed-vent system that are designated, as described in s. NR 631.08(3)(i), as unsafe to monitor are exempt from the requirements of par. (l)1.b. if both of the following conditions are met:

1. The owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with par. (l)1.b.

2. The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in par. (l)1.b. as frequently as practicable during safe-to-monitor times.

SECTION 112. NR 631.07(2)(intro.) is amended to read:

NR 631.07(2)(intro.) When a closed-vent system is tested for compliance with no detectable emissions, as required in s. NR ~~631.06(2)(k)1.~~ 631.06(2)(l)1., the test shall comply with the following requirements:

SECTION 113. NR 631.07(4)(a)3.(Note) is repealed.

SECTION 114. NR 631.07(4)(a)3. is amended to read:

NR 631.07(4)(a)3. Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060 or ~~8240~~ 8260 of EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," as incorporated by reference in s. NR 600.10(2)(b)1. and (c).

SECTION 115. NR 631.08(4) is amended to read:

NR 631.08(4) Records of the monitoring, operating and inspection information required by sub. (3)(c) to ~~(h) need~~ (j) shall be ~~kept only~~ maintained by the owner or operator for at least 3 years following the date of each occurence, measurement, maintenance, corrective action or record.

SECTION 116. NR 632.02(2)(intro.) and (b) are amended to read:

NR 632.02(2)(intro.) Except as provided in s. NR 632.09(11), this chapter applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10% by weight that are managed in one of the following:

(b) ~~Hazardous~~ Units, including hazardous waste recycling units, that are not exempt from licensing under the provisions of s. NR 615.05(4) and that are located on hazardous waste management facilities otherwise subject to the licensing requirements of ch. NR 680.

Note: A unit that is exempt from licensing under s. NR 615.05(4) refers to a 90-day tank or container.

SECTION 117. NR 632.02(2)(c) is created to read:

NR 632.02(2)(c) Units that are exempt from licensing under the provisions of s. NR 615.05(4).

SECTION 118. NR 632.06(4) is amended to read:

NR 632.06(4) SAMPLING CONNECTING SYSTEMS. (a) Each sampling connection system shall be equipped with a closed purge system, a closed-loop system or closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge system, closed-loop system or closed-vent system required in par. (a) shall meet one of the following requirements:

1. Return the purged ~~hazardous waste stream~~ process fluid directly to the ~~hazardous waste management~~ process line ~~with no detectable emissions to atmosphere, or~~ .

2. Collect and recycle the purged ~~hazardous waste stream with no detectable emissions to atmosphere, or~~ process fluid.

3. Be designed and operated to capture and transport all the purged ~~hazardous waste stream~~ process fluid to a waste management unit that complies with ss. NR 633.07 to 633.09 or to a control device that complies with the requirements of sub. (9).

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of pars. (a) and (b).

SECTION 119. NR 632.08(4)(b)(Note) is repealed.

SECTION 120. NR 632.08(4)(b) is amended to read:

NR 632.08(4)(b) Method 9060 or ~~8240~~ 8260 of EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," as incorporated by reference in s. NR 600.10(2)(b)1. and (c); or

SECTION 121. NR 632.10(13) is amended to read:

NR 632.10(13) The owner or operator of any facility that is subject to this chapter and to 40 CFR part 60, ~~section~~ subpart VV, or 40 CFR part 61, ~~section~~ subpart V, may elect to determine compliance with this chapter by documentation either pursuant to this section, or pursuant to those provisions of 40 CFR part 60 or 61, to the extent that the documentation under the regulation at 40 CFR part 60 or 61 duplicates the documentation required under this section. The documentation under the regulation at 40 CFR part 60 or part 61 shall be kept with or made readily available with the facility operating record.

Note: The publication containing the CFR references may be obtained from:

Superintendent of Documents

U.S. Government Printing Office
PO Box 371954
Pittsburgh, PA 15250-7954
(202) 783-3238

This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

SECTION 122. NR 632.11(4) is created to read:

NR 632.11(4) FEASIBILITY AND PLAN OF OPERATION REPORT REQUIREMENTS FOR AIR EMISSION CONTROLS FOR TANKS, SURFACE IMPOUNDMENTS AND CONTAINERS. Owners and operators of tanks, surface impoundments or containers that use air emission controls in accordance with the requirements of ch. NR 633 shall provide the following additional information:

(a) Documentation for each floating roof cover installed on a tank subject to s. NR 633.07(3)(a) or (b) that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in s. NR 633.07(4)(a) or (5)(a).

(b) Identification of each container area subject to the requirements of ch. NR 633 and certification by the owner or operator that the requirements of ch. NR 633 are met.

(c) Documentation for each enclosure used to control air emissions from tanks or containers in accordance with the requirements of s. NR 633.07(3)(e) or 633.09(4)(a)2. that includes records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Enclosure" under 40 CFR 52.741, appendix B.

(d) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of s. NR 633.08(2) that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in s. NR 633.08(2)(a).

(e) Documentation for each closed-vent system and control device installed in accordance with the requirements of s. NR 633.10 that includes design and performance information as specified in s. NR 632.11(2)(c) and (d).

(f) An emission monitoring plan for both Method 21 in 40 CFR part 60, Appendix and control device monitoring methods. This plan shall include the following information: monitoring points, monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.

(g) When an owner or operator of a facility subject to s. NR 680.22 cannot comply with ch. NR 633 by the date of license issuance, the schedule of implementation required under s. NR 633.04.

SECTION 123. Chapter NR 633 is created to read:

Chapter NR 633

Air Emission Standards for Tanks, Surface Impoundments and Containers



NR 633.01 PURPOSE. The purpose of this chapter is to specify general requirements for the control of air emissions from facilities that treat, store or dispose of hazardous waste in tanks, surface impoundments or containers.

NR 633.02 APPLICABILITY. (1) This chapter applies to owners and operators of all facilities that treat, store or dispose of hazardous waste in tanks, surface impoundments or containers subject to either ch. NR 645, 660 or 640 except as sub. (2) provides otherwise.

(2) The requirements of this chapter do not apply to the following waste management units at the facility:

(a) A waste management unit that holds hazardous waste placed in the unit before June 5, 1995, and in which no hazardous waste is added to the unit on or after June 5, 1995.

(b) A container that has a design capacity less than or equal to 0.1 $m^3$.

(c) A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(d) A surface impoundment in which an owner or operator has stopped adding hazardous waste, except to implement an approved closure plan, and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(e) A waste management unit that is used solely for on-site treatment or storage of hazardous waste that is generated as the result of implementing remedial activities required under the corrective action authorities of s. NR 635.17 and 291.37, Stats., or authorities under s. 3004(u), 3004(v) or 3008(h) of the federal resource conservation and recovery act as defined in s. 291.01(17), Stats.; the "investigation and remediation of environmental contamination" authorities of chs. NR 700 to 736, the "hazardous substance spills" authority of ch. 292, Stats. or the comprehensive environmental response, compensation and liability act (CERCLA) as defined in s. NR 700.03.

(f) A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the U.S. atomic energy act and the U.S. nuclear waste policy act.

(g) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable clean air act regulation codified under 40 CFR part 60, part 61 or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control includes an enclosure, as opposed to a cover, shall be in compliance with the enclosure and control device requirements of s. NR 633.07(8), except as provided in s. NR 633.07(2)(e).

(h) A tank that has a process vent.

(3) If the owner or operator of a facility subject to this chapter has received a license from the department under chs. NR 600 to 685 prior to June 5, 1995, the requirements of this chapter shall be incorporated into the license when it is reviewed under s. NR 680.45(6) to (8). Until the date when the owner and operator receives a final permit incorporating the requirements of this chapter, the owner and operator is subject to the requirements of s. NR 680.22.

Note: Publications containing the CFR references referred to in this chapter may be obtained from:

Superintendent of Documents
U.S. Government Printing Office
P.O. Box 371954
Pittsburgh, PA 15250-7954
(202) 512-1800

This publication is available for inspection at the offices of the department, the secretary of state, and the revisor of statutes.

NR 633.03 DEFINITIONS. As used in this chapter, all terms shall have the meaning given them in ss. NR 600.03 and 631.03. In addition, the following terms apply to this chapter:

(1) "Average volatile organic concentration" or "average VO concentration" means the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of s. NR 633.06.

(2) "Closure device" means a cap, hatch, lid, plug, seal, valve or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include

devices that are detachable from the cover, including a sampling port cap; manually operated devices, including a hinged access lid or hatch, and devices that are automatically operated, including a spring-loaded pressure relief valve.

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

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

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

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

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

(8) "Floating membrane cover" means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous waste being managed in a surface impoundment.

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

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

(11) "In light material service" means the container is used to manage a material for which both of the following conditions apply:

(a) the vapor pressure of one or more of the organic constituents in the material is greater than 0.3 kilopascals (kPa) at 20°C; and

(b) the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20% by weight.

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

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

(14) "Maximum organic vapor pressure" means the sum of the individual organic constituent partial pressures exerted by the material contained in a tank, at the maximum vapor pressure-causing conditions, including temperature, agitation and the pH effects of combining wastes, reasonably expected to occur in the tank.

Note: For the purpose of this chapter, maximum organic vapor pressure is determined using the procedures specified in s. NR 633.06(3).

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

(16) "No detectable organic emissions" means no escape of organic compounds to the atmosphere as determined using the procedure specified in s. NR 633.06(4).

(17) "Point of waste origination" means:

(a) When the facility owner or operator is the generator of the hazardous waste, the point where a solid waste produced by a system, process or waste management unit is determined to be a hazardous waste as defined in chs. NR 600 to 685.

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

(b) When the facility owner or operator is not the generator of the hazardous waste, the point where the owner or operator accepts delivery or takes possession of the hazardous waste.

(18) "Point of waste treatment" means the point where a hazardous waste to be treated in accordance with s. NR 633.05(3)(b) exits the treatment process.

Note: Any waste determination shall be made before the waste is conveyed, handled or otherwise managed in a manner that allows the waste to volatilize to the atmosphere.

(19) "Safety device" means a closure device such as a pressure relief valve, frangible disc, fusible plug or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental or emergency event. For the purpose of this chapter, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer

recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive or hazardous materials.

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

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

(22) "Volatile organic concentration" or "VO concentration" means the fraction by weight of the volatile organic compounds contained in a hazardous waste expressed in terms of parts per million (ppmw) as determined by direct measurement or by knowledge of the waste in accordance with the requirements of s. NR 633.06.

Note: For the purpose of determining the VO concentration of a hazardous waste, organic compounds with a Henry's law constant value of 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 $1.8 \times 10^{-6}$ atmospheres/gram-mole/$m^3$, at 25 degrees Celsius must be included. Appendix I of this chapter presents a list of compounds known to have a Henry's law constant value less than the cutoff level.

(23) "Waste determination" means performing all applicable procedures in accordance with the requirements of s. NR 633.06 to determine whether a hazardous waste meets standards specified in this chapter.

Note: Examples of a waste determination include performing the procedures in accordance with s. NR 633.06 to make any of the following determinations: to determine the average VO concentration of a hazardous waste at the point of waste origination; to determine the average VO concentration of a hazardous waste at the point of waste treatment and compare the results to the exit concentration limit specified for the process used to treat the hazardous waste; to determine the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous waste and compare the results to the applicable standards; or to determine the maximum volatile organic vapor pressure for a hazardous waste in a tank and compare the results to the applicable standards.

(24) "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, the "Paint Filter Liquids Test," in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, as incorporated by reference in s. NR 600.10(2)(b)1. and (c). 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."

NR 633.04 SCHEDULE FOR IMPLEMENTATION OF AIR EMISSION STANDARDS. (1) Owners or operators of facilities existing on June 5, 1995, and subject to chs. NR 640, 645 and 660 shall meet the following requirements:

(a) Install and begin operation of all control equipment required by this chapter by June 5, 1995, except as provided in par. (b).

(b) When control equipment required by this chapter cannot be installed and in operation by June 5, 1995, the owner or operator shall:

1. Install and begin operation of the control equipment as soon as possible but no later than December 8, 1997.

2. Prepare an implementation schedule that includes the following information:

a. Specific calendar dates for award of contracts or issuance of purchase orders for the control equipment,

b. Initiation of on-site installation of the control equipment, and

c. Completion of the control equipment installation and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this chapter.

3. For facilities subject to the recordkeeping requirements of s. NR 680.22(15), enter the implementation schedule specified in subd. 2. in the operating record no later than June 5, 1995.

4. For facilities not subject to s. NR 680.22(15), the owner or operator shall enter the implementation schedule specified in subd. 2. in a permanent, readily available file located at the facility no later than June 5, 1995.

(2) Owners or operators of facilities in existence on the effective date of statutory or regulatory amendments that render the facility subject to chs. NR 640, 645 and 660 shall meet the following requirements:

(a) Install and begin operation of all control equipment required by this chapter by the effective date of the amendment except as provided in par. (b).

(b) When control equipment required by this chapter cannot be installed and begin operation by the effective date of the amendment, the owner or operator shall:

1. Install and operate the control equipment as soon as possible but no later than 30 months after the effective date of the amendment.

2. For facilities subject to the recordkeeping requirements of s. NR 680.22(15), enter and maintain the implementation schedule specified in sub. (1)(b)2. in the operating record no later than the effective date of the amendment.

3. For facilities not subject to s. NR 680.22(15), enter and maintain the implementation schedule specified in sub. (1)(b)2. in a permanent, readily available file located at the facility site no later than the effective date of the amendment.

(3) The department may elect to extend the implementation date for control equipment at a facility, on a case-by-case basis, to a date later than December 8, 1997, when special circumstances that are beyond the facility owner's or operator's control delay installation or operation of control equipment and the owner or operator has made all reasonable and prudent attempts to comply with the requirements of this chapter.

NR 633.05 STANDARDS: GENERAL. This section applies to the management of hazardous waste in tanks, surface impoundments and containers subject to this chapter.

(1) The owner or operator shall control air pollutant emissions from each waste management unit in accordance with standards specified in ss. NR 633.07 to 633.10, as applicable to the waste management unit, except as provided for in sub. (2).

(2) The following are exempt from the standards specified in ss. NR 633.07 to 633.10:

(a) A tank, surface impoundment or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in s. NR 633.06. The owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit.

(b) A tank, surface impoundment or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

1. A process that removes or destroys the organic compounds contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit ($C_t$) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in s. NR 633.06(2).

2. A process that removes or destroys the organic compounds contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95%, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 100 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in s. NR 633.06(2).

3. A process that removes or destroys the organic compounds contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in s. NR 633.06(2).

4. A biological process that destroys or degrades the organic compounds contained in the hazardous waste, such that either of the following conditions is met:

a. The organic reduction efficiency (R) for the process is equal to or greater than 95%, and the organic biodegradation efficiency ($R_{bio}$) for the process is equal to or greater than 95%. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in s. NR 633.06(2).

b. The total actual organic mass biodegradation rate ($MR_{bio}$) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate

(RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in s. NR 633.06(2).

5. A process that removes or destroys the organic compounds contained in the hazardous waste and meets all of the following conditions:

a. From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units which use air emission controls in accordance with the standards specified in ss. NR 633.07 to 633.10, as applicable to the waste management unit.

b. From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere.

Note: EPA considers a drain system that meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems to be a closed system.

c. The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or 500 ppmw, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in s. NR 633.06(2). The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in s. NR 633.06(1).

6. A process that removes or destroys the organic compounds contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95% and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination shall be determined using the procedures specified in s. NR 633.06(1) or (2).

7. A hazardous waste incinerator for which the owner or operator has either:

a. Been issued an operating license under s. NR 680.32 which implements the requirements of ch. NR 665; or

b. Has designed and operates the incinerator in accordance with the interim status requirements of ch. NR 665.

8. A boiler or industrial furnace for which the owner or operator has either:

a. Been issued an operating license under s. NR 680.32 which implements the requirements of 40 CFR part 266, subpart H, or

b. Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of 40 CFR part 266, subpart H.

9. For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of subd. 1. to 6., the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

a. If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method.

b. If any other analytical method is used, one-half the limit of detection established for the method.

(c) A tank used for biological treatment of hazardous waste in accordance with the requirements of par. (b)4.

(d) A tank, surface impoundment, or container for which all hazardous waste placed in the unit either:

1. Meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in s. NR 675.20 Table "Treatment Standards for Hazardous Waste"; or

2. Has been treated by the treatment technology established for the waste in s. NR 675.22(1), or treated by an equivalent method of treatment approved by the department pursuant to s. NR 675.22(2).

(e) A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:

1. The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart FF--National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;

2. The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996 and

3. The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.

(3) The department may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface

impoundment or container exempted from using air emission controls under the provisions of this section as follows:

(a) The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of s. NR 633.06(1). The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of s. NR 633.06(2).

(b) In performing a waste determination pursuant to par. (a), the sample preparation and analysis shall be conducted as follows:

1. In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in subd. 2.

2. If the department determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment or container, then the department may choose an appropriate method.

(c) In a case when the owner or operator is requested to perform the waste determination, the department may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

(d) In a case when the results of the waste determination performed or requested by the department do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of par. (a) shall be used to establish compliance with the requirements of this chapter.

(e) In a case when the owner or operator has used an averaging period greater than one hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the department may elect to establish compliance with this chapter by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a 1-hour period as follows:

1. The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of s. NR 633.06(1).

2. Results of the waste determination performed or requested by the department showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw shall constitute noncompliance with this chapter except in a case as provided for in par. (e)3.

3. For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than one hour to be less than 500 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given 1-hour period may be equal to or greater than 500 ppmw, information, such as test results, measurements, calculations and other documentation, that was used by the owner or operator to determine the average VO concentration of the hazardous waste and recorded in the facility records in accordance with the requirements of

ss. NR 633.06(1) and NR 633.12 shall be considered by the department together with the results of the waste determination performed or requested by the department in establishing compliance with this chapter.

NR 633.06 WASTE DETERMINATION PROCEDURES. (1) WASTE DETERMINATION PROCEDURE TO DETERMINE AVERAGE VOLATILE ORGANIC (VO) CONCENTRATION OF A HAZARDOUS WASTE AT THE POINT OF WASTE ORIGINATION. (a) An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under s. NR 633.05(2)(a) from using air emission controls in accordance with standards specified in ss. NR 633.07 to 633.10, as applicable to the waste management unit.

(b) The average VO concentration of a hazardous waste at the point of waste origination shall be determined using either direct measurement as specified in par. (c) or knowledge as specified in par. (d).

(c) The procedures specified in this paragraph shall be used to make a direct measurement to determine average VO concentration of a hazardous waste at the point of waste origination.

1. Identification. The owner or operator shall identify and record the point of waste origination for the hazardous waste.

2. Sampling. Samples of the hazardous waste stream shall be collected at the point of waste origination in a manner such that volatilization of organic compounds contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

a. The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but may not exceed one year.

b. A sufficient number of samples, but no less than 4 samples, shall be collected for the hazardous waste stream to represent the complete range of compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

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 organic compounds 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.

Note: 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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or in Method 25D in 40 CFR part 60, appendix A.

3. Analysis. Each collected sample shall be prepared and analyzed in accordance with one or more of the methods listed in this subdivision, 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 shall 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 $1.8 \times 10^{-6}$ atmospheres/gram-mole/$m^3$ at 25°C. 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 shall 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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c), to analyze one or more compounds that are not on that method's published list, the procedures in subpar. h. shall be followed.

Note: Each of the analytical methods listed in subpars. b. to g. has an associated list of approved chemical compounds, for which EPA considers the method appropriate for measurement.

Note: 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 par. (d)3.

Note: 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.

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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c). Maintain a formal quality assurance program consistent with the requirements of Method 8260. The quality assurance program shall include both 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, as well as 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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c). Maintain a formal quality assurance program consistent with the requirements of Method 8270. The quality assurance program shall include both documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction or sorption during the sample collection, storage, and preparation steps, as well as measurement of the overall accuracy and precision of the specific procedures.

h. 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 subd. 3.i.

i. 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.

4. Calculations. The average VO concentration (C) on a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with subd. 3. and the following equation:

$$\overline{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

Where:

$\overline{C}$ = Average VO concentration of the hazardous waste at the point of waste origination on a mass-weighted basis, ppmw.
i = Individual sample "i" of the hazardous waste.
n = Total number of samples of the hazardous waste collected (at least 4) for the averaging period (not to exceed 1 year).
$Q_i$ = Mass quantity of hazardous waste stream represented by $C_i$, kg/hr.

$Q_T$ = Total mass quantity of hazardous waste during the averaging period, kg/hr.
$C_i$ = Measured VO concentration of sample "i" as determined in accordance with subd. 3., ppmw.

(d) Where owner or operator knowledge is used to determine average VO concentration of a hazardous waste at the point of waste origination, the owner or operator shall follow the procedures specified in this paragraph.

1. Documentation shall be prepared that presents the information used as the basis for the owner or operator's knowledge of the hazardous waste stream's average VO concentration.

Note: Examples of information that may be used as the basis for knowledge include material balances for the source or process generating the hazardous waste stream; constituent-specific chemical test data for the hazardous waste stream from previous testing that are still applicable to the current waste stream; previous test data for other locations managing the same type of waste stream; or other knowledge based on information included in manifests, shipping papers, or waste certification notices.

2. If test data are used as the basis for knowledge, the owner or operator shall document the test method, sampling protocol and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration.

Note: An owner or operator may use organic concentration test data for the hazardous waste stream that are validated in accordance with Method 301 in 40 CFR part 63, appendix A as the basis for knowledge of the waste.

3. An owner or operator using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous waste may adjust the test data 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 for each individual chemical constituent contained in the waste shall be multiplied by the appropriate constituent-specific adjustment factor ($f_{m25D}$).

4. In the event that the department and the owner or operator disagree on a determination of the average VO concentration for a hazardous waste stream using knowledge, the results from a determination of average VO concentration using direct measurement as specified in par. (c) shall be used to establish compliance with the applicable requirements of this chapter. The department may perform or request that the owner or operator perform this determination using direct measurement.

(2) WASTE DETERMINATION PROCEDURES FOR TREATED HAZARDOUS WASTE. (a) An owner or operator shall perform the applicable waste determination for each treated hazardous waste placed in a waste management unit exempted under s. NR 633.05(2)(b) from using air emission controls in accordance with standards specified in s. NR 633.07 to 633.10, as applicable to the waste management unit.

(b) The owner or operator shall designate and record the specific provision in s. NR 633.05(2)(b) under which the waste determination is being performed. The waste determination for the treated hazardous waste shall be performed using the applicable procedures specified in pars. (c) to (i).

(c) The procedures specified in this paragraph shall be used to determine the average VO concentration of a hazardous waste at the point of waste treatment.

1. Identification. The owner or operator shall identify and record the point of waste treatment for the hazardous waste.

2. Sampling. Samples of the hazardous waste stream shall be collected at the point of waste treatment in a manner such that volatilization of organic compounds contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

a. The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis shall be designated and recorded. The averaging period may represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but shall not exceed 1 year.

b. A sufficient number of samples, but no less than four samples, shall be collected for the hazardous waste stream to represent the complete range of compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the process treating the hazardous waste stream.

Note: Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

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 organic compounds 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.

Note: 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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or in Method 25D in 40 CFR part 60, appendix A.

3. Analysis. Each collected sample shall be prepared and analyzed in accordance with one or more of the methods listed in subd. 3.a. to i., 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 shall 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 x $10^{-6}$ atmospheres/gram-mole/$m^3$ at 25°C. 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 shall 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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c), to analyze one or more compounds that are not on that method's published list, the procedures in subd. 3.h. shall be followed.

Note: Each of the analytical methods listed in subd. 3.b. to g. has an associated list of approved chemical compounds, for which EPA considers the method appropriate for measurement.

Note: At the owner's 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 sub. (1)(d)3.

Note: 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.

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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c). Maintain a formal quality assurance program consistent with the requirements of Method 8260. The quality assurance program shall include both 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, as well as 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, as incorporated by reference in s. NR 600.10(2)(b)1. and

(c). Maintain a formal quality assurance program consistent with the requirements of Method 8270. The quality assurance program shall include both 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, as well as measurement of the overall accuracy and precision of the specific procedures.

h. 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 subd. 3.i.

i. 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.

4. Calculations. The average VO concentration (C) on a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with subd. 3. and the following equation:

$$\overline{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

Where:

$\overline{C}$ = Average VO concentration of the hazardous waste at the point of waste treatment on a mass-weighted basis, ppmw.
i = Individual sample "i" of the hazardous waste.
n = Total number of samples of the hazardous waste collected (at least 4) for the averaging period (not to exceed 1 year).
$Q_i$ = Mass quantity of hazardous waste stream represented by $C_i$, kg/hr.
$Q_T$ = Total mass quantity of hazardous waste during the averaging period, kg/hr.
$C_i$ = Measured VO concentration of sample "i" as determined in accordance with the requirements of subd. 3., ppmw.

(d) The procedure specified in this paragraph shall be used to determine the exit concentration limit ($C_t$) for a treated hazardous waste.

1. The point of waste origination for each hazardous waste treated by the process at the same time shall be identified.

2. If a single hazardous waste stream is identified in subd. 1., the exit concentration limit ($C_t$) shall be 500 ppmw.

3. If more than one hazardous waste stream is identified in subd. 1., the average VO concentration of each hazardous waste stream at the point of waste origination shall be determined in accordance with the requirements of sub. (1). The exit concentration limit ($C_t$) shall be calculated by using the results determined for each individual hazardous waste stream and the following equation:

$$C_t = \frac{\sum_{x=1}^{m} (Q_x \times \overline{C_x}) + \sum_{y=1}^{n} (Q_y \times 500 ppmw)}{\sum_{x=1}^{m} Q_x + \sum_{y=1}^{n} Q_y}$$

Where:
$C_t$ = Exit concentration limit for treated hazardous waste, ppmw.
x = Individual hazardous waste stream "x" that has an average VO concentration less than 500 ppmw at the point of waste origination as determined in accordance with the requirements of sub (1).
y = Individual hazardous waste stream "y" that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination as determined in accordance with the requirements of sub. (1).
m = Total number of "x" hazardous waste streams treated by process.
n = Total number of "y" hazardous waste streams treated by process.
$Q_x$ = Annual mass quantity of hazardous waste stream "x," kg/yr.
$Q_y$ = Annual mass quantity of hazardous waste stream "y," kg/yr.
$_x$ = Average VO concentration of hazardous waste stream "x" at the point of waste origination as determined in accordance with the requirements of sub. (1), ppmw.

(e) The procedure specified in this paragraph shall be used to determine the organic reduction efficiency (R) for a treated hazardous waste.

1. The organic reduction efficiency (R) for a treatment process shall be determined based on results for a minimum of 3 consecutive runs.

2. All hazardous waste streams entering the treatment process and all hazardous waste streams exiting the treatment process shall be identified. The owner or operator shall prepare a sampling plan for measuring these streams that accurately reflects the retention time of the hazardous waste in the process.

3. For each run, information shall be determined for each hazardous waste stream identified in subd. 2. using the following procedures:

a. The mass quantity of each hazardous waste stream entering the process ($Q_b$) and the mass quantity of each hazardous waste stream exiting the process ($Q_a$) shall be determined.

b. The average VO concentration at the point of waste origination of each hazardous waste stream entering the process ( $\bar{C}_b$) during the run shall be determined in accordance with the requirements of sub. (1)(c). The average VO concentration at the point of waste treatment of each waste stream exiting the process ( $\bar{C}_a$) during the run shall be determined in accordance with the requirements of sub. (2)(c).

4. The waste volatile organic mass flow entering the process ($E_b$) and the waste volatile organic mass flow exiting the process ($E_a$) shall be calculated by using the results determined in accordance with subd. 3. and the following equations:

$$E_b = \frac{1}{10^6}\sum_{j=1}^{m}(Q_{bj}x\overline{C_{bj}})$$

$$E_a = \frac{1}{10^6}\sum_{j=1}^{m}(Q_{aj}x\overline{C_{aj}})$$

Where:

$E_a$ = Waste volatile organic mass flow exiting process, kg/hr.
$E_b$ = Waste volatile organic mass flow entering process, kg/hr.
m = Total number of runs (at least 3)
j = Individual run "j"
$Q_b$ = Mass quantity of hazardous waste entering process during run "j," kg/hr.
$Q_a$ = Average mass quantity of hazardous waste exiting process during run "j," kg/hr.
$\bar{C}_a$ = Average VO concentration of hazardous waste exiting process during run "j" as determined in accordance with par. (c), ppmw.
$\bar{C}_b$ = Average VO concentration of hazardous waste entering process during run "j" as determined in accordance with par. (c), ppmw.

5. The organic reduction efficiency of the process shall be calculated by using the results determined in accordance with subd. 4. and the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100\%$$

Where:

R = Organic reduction efficiency, percent.
$E_b$ = Waste volatile organic mass flow entering process as determined in accordance with the requirements of subd. 4., kg/hr.
$E_a$ = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of subd. 4., kg/hr.

(f) The procedure specified in this paragraph shall be used to determine the organic biodegradation efficiency ($R_{bio}$) for a treated hazardous waste.

1. The fraction of organics biodegraded ($F_{bio}$) shall be determined using the procedure specified in 40 CFR part 63, appendix C.

2. The $R_{bio}$ shall be calculated by using the following equation:

$$R_{bio} = F_{bio} \times 100\%$$

Where:

$R_{bio}$ = Organic biodegradation efficiency, percent.
$F_{bio}$ = Fraction of organic biodegraded as determined in accordance with the requirements of subd. 1.

(g) The procedure specified in this paragraph shall be used to determine the required organic mass removal rate (RMR) for a treated hazardous waste.

1. All of the hazardous waste streams entering the treatment process shall be identified.

2. The average VO concentration of each hazardous waste stream at the point of waste origination shall be determined in accordance with sub. (1).

3. For each individual hazardous waste stream that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination, the average volumetric flow rate and the density of the hazardous waste stream at the point of waste origination shall be determined.

4. The RMR shall be calculated by using the average VO concentration, average volumetric flow rate and density determined for each individual hazardous waste stream, and the following equation:

$$RMR = \sum_{y=1}^{n} \left[ V_y \; X \; k_y \; X \; \frac{(\bar{C}_y - 500 \; ppmw)}{10^6} \right]$$

Where:

RMR = Required organic mass removal rate, kg/hr.
y = Individual hazardous waste stream "y" that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination as determined in accordance with the requirements of sub. (1).
n = Total number of "y" hazardous waste streams treated by process.
$V_y$ = Average volumetric flow rate of hazardous waste stream "y" at the point of waste origination, $m^3$/hr.
$k_y$ = Density of hazardous waste stream "y," $kg/m^3$
$\bar{C}_y$ = Average VO concentration of hazardous waste stream "y" at the point of waste origination as determined in accordance with the requirements of sub. (1), ppmw.

(h) The procedure specified in this paragraph shall be used to determine the actual organic mass removal rate (MR) for a treated hazardous waste.

1. The MR shall be determined based on results for a minimum of 3 consecutive runs. The sampling time for each run shall be one hour.

2. The waste volatile organic mass flow entering the process ($E_b$) and the waste volatile organic mass flow exiting the process ($E_a$) shall be determined in accordance with the par. (e)2.

3. The MR shall be calculated by using the mass flow rate determined in accordance with subd. 2. and the following equation:

Where:

$MR = E_b - E_a$
MR = Actual organic mass removal rate, kg/hr.
$E_b$ = Waste volatile organic mass flow entering process as determined in accordance with par. (e)4., kg/hr.
$E_a$ = Waste volatile organic mass flow exiting process as determined in accordance with par. (e)4., kg/hr.

(i) The procedure specified in this paragraph shall be used to determine the actual organic mass biodegradation rate ($MR_{bio}$) for a treated hazardous waste.

1. The $MR_{bio}$ shall be determined based on results for a minimum of 3 consecutive runs. The sampling time for each run shall be one hour.

2. The waste organic mass flow entering the process ($E_b$) shall be determined in accordance with par. (e)4.

3. The fraction of organic biodegraded ($F_{bio}$) shall be determined using the procedure specified in 40 CFR part 63, appendix C.

4. The $MR_{bio}$ shall be calculated by using the mass flow rates and fraction of organic biodegraded determined in accordance with subds. 2. and 3., respectively, and the following equation:

Where:

$MR_{bio} = E_b \times F_{bio}$
$MR_{bio}$ = Actual organic mass biodegradation rate, kg/hr.
$E_b$ = Waste organic mass flow entering process as determined in accordance with par. (e)4., kg/hr.
$F_{bio}$ = Fraction of organic biodegraded as determined in accordance with the requirements of subd. 3.

(3) PROCEDURE TO DETERMINE THE MAXIMUM ORGANIC VAPOR PRESSURE OF A HAZARDOUS WASTE IN A TANK. (a) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with the standards specified in s. NR 633.07(2).

(b) An owner or operator shall use either direct measurement as specified in par. (c) or knowledge of the waste as specified by par. (d) to determine the maximum organic vapor pressure which is representative of the hazardous waste composition stored or treated in the tank.

(c) Where direct measurement is used to determine the maximum organic vapor pressure of a hazardous waste, the owner or operator shall follow the procedures specified in this paragraph.

1. 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 organic compounds 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.

Note: 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, as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or in Method 25D in 40 CFR part 60, appendix A.

2. Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous waste:

a. Method 25E in 40 CFR part 60 appendix A.

b. Methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks".

c. Methods obtained from standard reference texts.

d. ASTM Method 2879-92.

e. Any other method approved by the department.

(d) Where knowledge is used to determine the maximum organic vapor pressure of the hazardous waste, the owner or operator shall follow the procedures specified in this paragraph. Documentation shall be prepared and recorded that presents the information used as the basis for the owner or operator's knowledge that the maximum organic vapor pressure of the hazardous waste is less than the maximum vapor pressure limit listed in s. NR 633.07(1)(a)1. for the applicable tank design capacity category.

Note: An example of information that may be used is documentation that the hazardous waste is generated by a process for which at other locations it previously has been determined by direct measurement that the waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

(4) PROCEDURE FOR DETERMINING NO DETECTABLE ORGANIC EMISSIONS FOR THE PURPOSE OF COMPLYING WITH THIS CHAPTER. (a) An owner or operator shall conduct a test for determining no detectable organic emissions for the purpose of complying with this chapter in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface on the cover and associated closure devices shall be checked.

Note: A potential leak interface is a location where organic vapor leakage could occur. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to the following: The interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.

(b) The owner or operator shall perform the test when the unit contains a hazardous waste having an organic concentration representative of the range of concentrations for the hazardous waste expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.

(c) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of

Method 21 shall be for the average composition of the organic constituents in the hazardous waste placed in the waste management unit, not for each individual organic constituent.

(d) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(e) Calibration gases shall be both of the following:

1. Air containing less than 10 ppmv hydrocarbon in air.

Note: Air containing less than 10 ppmv hydrocarbon is sometimes referred to as "zero air".

2. A mixture of methane in air at a concentration of less than 10,000 ppmv.

Note: The use of the detection instrument and Method 21 may only result in approximate readings.

(f) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.

(g) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21 of 40 CFR part 60, appendix A. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with a pressure relief device, such as an enclosed extension or horn, the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

Note: Enclosed extensions or horns are some pressure relief devices.

(h) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv except when monitoring a seal around a rotating shaft that passes through a cover opening, in which case the comparison shall be as specified in par. (i). If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

(i) For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 10,000 ppmw. If the difference is less than 10,000 ppmw, then the potential leak interface is determined to operate with no detectable organic emissions.

NR 633.07 STANDARDS: TANKS. This section applies to the control of air pollutant emissions from tanks for which s. NR 633.05(1) references the use of this section for air emission control.

(1) The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with this subsection, as applicable.

(a) For a tank that manages hazardous waste that meets all of the conditions specified in subds. 1. to 3., the owner or operator shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in sub. (2) or the Tank Level 2 controls specified in sub. (3).

1. The hazardous waste in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:

a. For a tank design capacity equal to or greater than 151 $m^3$, the maximum organic vapor pressure limit for the tank is 5.2 kPa.

b. For a tank design capacity equal to or greater than 75 $m^3$ less than 151 $m^3$, the maximum organic vapor pressure limit for the tank is 27.6 kPa.

c. For a tank design capacity less than 75 $m^3$, the maximum organic vapor pressure limit for the tank is 76.6 kPa.

2. The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with subd. 1.

3. The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process.

(b) For a tank that manages hazardous waste that does not meet all of the conditions specified in par. (a)1. to 3., the owner or operator shall control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with sub. (4).

Note: Examples of tanks required to use Tank Level 2 controls include: A tank used for a waste stabilization process; and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in par. (a)1.

(2) Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet all of the following requirements:

(a) The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in s. NR 633.06(3). Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase

to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in sub. (1)(a)1., as applicable to the tank.

(b) The tank shall be equipped with a fixed roof designed to meet the following specifications:

1. The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank or may be an integral part of the tank structural design.

Note: An example of a separate cover installed on the tank is a removable cover mounted on an open-top tank. An example of a fixed roof which is an integral part of the tank structural design is a horizontal cylindrical tank equipped with a hatch.

2. The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

3. Each opening in the fixed roof shall be one of the following:

a. Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps or other open spaces in the closure device or between the perimeter of the opening and the closure device.

b. Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organic compounds in the vent stream, and it shall be operating whenever hazardous waste is managed in the tank.

4. The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life.

Note: Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include organic vapor permeability; the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(c) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

1. Opening of closure devices or removal of the fixed roof is allowed at the following times:

a. To provide access to the tank for performing routine inspection, maintenance or other activities needed for normal operations. Following completion of the activity, the owner

or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

Note: Examples of routine inspection, maintenance, or other activities needed for normal operations include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment.

b. To remove accumulated sludge or other residues from the bottom of tank.

2. Opening of a spring-loaded pressure-vacuum relief valve, conservation vent or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive or hazardous materials.

Note: Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

3. Opening of a safety device is allowed at any time conditions require doing so to avoid an unsafe condition.

(d) The owner or operator shall inspect the air emission control equipment in accordance with the requirements in subds. 1. to 3.

1. The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions.

Note: Defects include, but are not limited to, visible cracks, holes or gaps in the roof sections or between the roof and the tank wall; broken, cracked or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps or other closure devices.

2. The owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except under the special conditions provided for in sub. (11).

3. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with sub. (10).

4. The owner or operator shall maintain a record of the inspection in accordance with s. NR 633.12(2).

(3) Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(a) A fixed-roof tank equipped with an internal floating roof in accordance with sub. (4).

(b) A tank equipped with an external floating roof in accordance with sub. (5).

(c) A tank vented through a closed-vent system to a control device in accordance with sub. (6).

(d) A pressure tank designed and operated in accordance with sub. (7).

(e) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with sub. (8).

(4) The owner or operator who controls air pollutant emissions from a tank using a fixed-roof with an internal floating roof shall meet the requirements specified in pars. (a) to (c).

(a) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

1. The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

2. The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

a. A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal.

b. Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

3. The internal floating roof shall meet the following specifications:

a. Each opening in a noncontact internal floating roof except for automatic bleeder vents and the rim space vents shall provide a projection below the liquid surface.

Note: Automatic bleeder vents are also known as vacuum breaker vents.

b. Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells and stub drains.

c. Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90% of the opening.

d. Each automatic bleeder vent and rim space vent shall be gasketed.

e. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

f. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(b) The owner or operator shall operate the tank in accordance with the following requirements:

1. When the floating roof is resting on the leg supports, the process of filling, emptying or refilling shall be continuous and shall be completed as soon as practical.

2. Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

3. Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed. An internal floating roof which is fastened closed shall have no visible gaps. Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(c) The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:

1. The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions.

Note: Defects include, but are not limited to: The internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than 10% open area.

2. The owner or operator shall inspect the internal floating roof components as follows except as provided in subd. 3.:

a. Visually inspect the internal floating roof components through openings on the fixed-roof at least once every 12 months after initial fill, and

Note: Openings on the fixed-roof include manholes and roof hatches.

b. Visually inspect the internal floating roof, primary seal, secondary seal, if one is in service, gaskets, slotted membranes and sleeve seals, if any, each time the tank is emptied and degassed and at least every 10 years.

3. As an alternative to performing the inspections specified in subd. 2. for an internal floating roof equipped with 2 continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes and sleeve seals, if any, each time the tank is emptied and degassed and at least every 5 years.

4. Prior to each inspection required by subd. 2. or 3., the owner or operator shall notify the department in advance of each inspection to provide the department with the opportunity to have an observer present during the inspection. The owner or operator shall notify the department of the date and location of the inspection as follows:

a. Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the department at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in subpar. b.

b. When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the department as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least 7 calendar days before refilling the tank.

5. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of sub. (10).

6. The owner or operator shall maintain a record of the inspection in accordance with s. NR 633.12(2).

(5) An owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in pars. (a) to (c).

(a) The owner or operator shall design the external floating roof in accordance with the following requirements:

1. The external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

2. The floating roof shall be equipped with 2 continuous seals, one above the other, between the wall of the tank and the roof edge.

Note: The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

a. The primary seal shall be a liquid-mounted seal or a metallic shoe seal. The total area of the gaps between the tank wall and the primary seal may not exceed 212 square centimeters ($cm^2$) per meter of tank diameter, and the width of any portion of these gaps may not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface.

b. The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal may not exceed 21.2 square centimeters ($cm^2$) per meter of tank diameter, and the width of any portion of these gaps may not exceed 1.3 centimeters (cm).

3. The external floating roof shall meet the following specifications:

a. Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

Note: Automatic bleeder vents are also known as vacuum breaker vents.

b. Except for automatic bleeder vents, rim space vents, roof drains and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal or lid.

c. Each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.

d. Each automatic bleeder vent and each rim space vent shall be equipped with a gasket.

e. Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening.

f. Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

g. Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

h. Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.

i. Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(b) The owner or operator shall operate the tank in accordance with the following requirements:

1. When the floating roof is resting on the leg supports, the process of filling, emptying or refilling shall be continuous and shall be completed as soon as practical.

2. Except for automatic bleeder vents, rim space vents, roof drains and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access.

3. Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

4. Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

5. Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

6. The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

7. The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access.

8. Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(c) The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows:

1. The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

a. The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every 5 years.

b. The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

c. If a tank ceases to hold hazardous waste for a period of 1 year or more, subsequent introduction of hazardous waste into the tank shall be considered an initial operation for the purposes of subd. 1.a. and b.

d. The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure. The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports. Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely, without forcing or binding against the seal, between the seal and the wall of the tank and measure the circumferential distance of each such location. For a seal gap measured under this paragraph, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance. The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal perimeter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in par. (a)2.

e. In the event that the seal gap measurements do not conform to the specifications in par. (a)2., the owner or operator shall repair the defect in accordance with the requirements of sub. (10).

f. The owner or operator shall maintain a record of the inspection in accordance with s. NR 633.12(2).

2. The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

a. The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions.

Note: Defects include, but are not limited to: Holes, tears or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps or other closure devices.

b. The owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in sub. (11).

c. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the sub. (10).

d. The owner or operator shall maintain a record of the inspection in accordance with s. NR 633.12(1).

3. Prior to each inspection required by subd. 1. or 2., the owner or operator shall notify the department in advance of each inspection to provide the department with the opportunity to have an observer present during the inspection. The owner or operator shall notify the department of the date and location of the inspection as follows:

a. Prior to each inspection to measure external floating roof seal gaps as required under subd. 1., written notification shall be prepared and sent by the owner or operator so that it is received by the department at least 30 calendar days before the date the measurements are scheduled to be performed.

b. Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the department at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in subd. 3.c.

c. When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the department as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least 7 calendar days before refilling the tank.

(6) The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in pars. (a) to (c).

(a) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

1. The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

2. Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

3. The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will

maintain the integrity of the fixed roof and closure devices throughout their intended service life.

Note: Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

4. The closed-vent system and control device shall be designed and operated in accordance with s. NR 633.10.

(b) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

1. Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

a. To provide access to the tank for performing routine inspection, maintenance or other activities needed for normal operations. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

Note: Examples of routine inspection, maintenance or other activities needed for normal operations include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment.

b. To remove accumulated sludge or other residues from the bottom of a tank.

2. Opening of a safety device, is allowed at any time conditions require doing so to avoid an unsafe condition.

(c) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

1. The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions.

Note: Defects include, but are not limited to, visible cracks, holes or gaps in the roof sections or between the roof and the tank wall; broken, cracked or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps or other closure devices.

2. The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in s. NR 633.10.

3. The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in sub. (11).

4. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of sub. (10).

5. The owner or operator shall maintain a record of the inspection in accordance with s. NR 633.12.

(7) The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

(a) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(b) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in s. NR 633.06.

(c) Whenever a hazardous waste is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except in the event that a safety device, is required to open to avoid an unsafe condition.

(8) The owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in pars. (a) to (d).

(a) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(b) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler or process heater specified in s. NR 633.10.

(c) Safety devices may be installed and operated as necessary on any enclosure, closed-vent system or control device used to comply with the requirements of pars. (a) and (b).

(d) The owner or operator shall inspect and monitor the closed-vent system and control device as specified in s. NR 633.10.

(9) The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements:

(a) Transfer of hazardous waste, except as provided in par. (b), to the tank from another tank subject to this section or from a surface impoundment subject to s. NR 633.08 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems.

(b) The requirements of par. (a) do not apply when transferring a hazardous waste to the tank under any of the following conditions:

1. The hazardous waste meets the average VO concentration conditions specified in s. NR 633.05 at the point of waste origination.

2. The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in s. NR 633.05(2)(b).

(10) The owner or operator shall repair each defect detected during an inspection performed in accordance with sub. (2)(d), (4)(c), (5)(c) or (6)(c) as follows:

(a) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in par. (b).

(b) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(11) Following the initial inspection and monitoring of the cover as required by this chapter, subsequent inspection and monitoring may be performed at intervals longer than one year under the following special conditions:

(a) In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

1. Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

2. Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of this chapter, as frequently as practicable during those times when a worker can safely access the cover.

(b) In the case when a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank, including fill ports, access hatches and gauge wells, that are located on or above the ground surface.

NR 633.08 STANDARDS: SURFACE IMPOUNDMENTS. The provisions of this section apply to the control of air pollutant emissions from surface impoundments for which s. NR 633.05(1) references the use of this section for air emission control.

(1) The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:

(a) A floating membrane cover in accordance with the provisions specified in sub. (2).

(b) A cover that is vented through a closed-vent system to a control device in accordance with sub. (3).

(2) The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in pars. (a) to (c).

(a) The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:

1. The floating membrane cover shall be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid.

2. The cover shall be fabricated from a synthetic membrane material that is either:

a. High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (mm); or

b. A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in subd. 2.a. and chemical and physical properties that maintain the material integrity for the intended service life of the material.

3. The cover shall be installed in a manner such that there are no visible cracks, holes, gaps or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

4. Except as provided for in subd. 5., each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

5. The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening or a flexible fabric sleeve seal.

6. The closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors which shall be considered when selecting the materials of construction and designing the cover and closure devices shall be organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(b) Whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

1. Opening of closure devices or removal of the cover is allowed at the following times:

a. To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable.

Note: Examples of routine inspection, maintenance, or other activities needed for normal operations include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment.

b. To remove accumulated sludge or other residues from the bottom of surface impoundment.

2. Opening of a safety device is allowed at any time conditions require doing so to avoid an unsafe condition.

(c) The owner or operator shall inspect the floating membrane cover in accordance with the following procedures:

1. The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions.

Note: Defects include, but are not limited to, visible cracks, holes or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps or other closure devices.

2. The owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in sub. (6).

3. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the sub. (5).

4. The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in s. NR 633.12(3).

(3) The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in pars. (a) to (c).

(a) The surface impoundment shall be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:

1. The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment.

2. Each opening in the cover not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions using the procedure specified in s. NR 633.06(4).

3. The cover and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors which shall be considered when selecting the materials for and designing the cover and closure devices shall be organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.

4. The closed-vent system and control device shall be designed and operated in accordance with s. NR 633.10.

(b) Whenever a hazardous waste is in the surface impoundment, the cover shall be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:

1. Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:

a. To provide access to the surface impoundment for performing routine inspection, maintenance or other activities needed for normal operations. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.

Note: Examples of routine inspection, maintenance or other activities needed for normal operations include those times when a worker needs to open a port to sample liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment.

b. To remove accumulated sludge or other residues from the bottom of surface impoundment.

2. Opening of a safety device is allowed at any time conditions require doing so to avoid an unsafe condition.

(c) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

1. The surface impoundment cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions.

Note: Defects include, but are not limited to, visible cracks, holes or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps or other closure devices.

2. The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in s. NR 633.10.

3. The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in sub. (6).

4. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of sub. (5).

5. The owner or operator shall maintain a record of the inspection in accordance with s. NR 633.12(3).

(4) The owner or operator shall transfer hazardous waste to a surface impoundment subject to this section in accordance with the following requirements:

(a) Transfer of hazardous waste, except as provided in par. (b), to the surface impoundment from another surface impoundment subject to this section or from a tank subject to s. NR 633.07 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems.

(b) The requirements of par. (a) do not apply when transferring a hazardous waste to the surface impoundment under either of the following conditions:

1. The hazardous waste meets the average VO concentration conditions specified in s. NR 633.05(2)(a) at the point of waste origination.

2. The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in s. NR 633.05(2)(b).

(5) The owner or operator shall repair each defect detected during an inspection performed in accordance with sub. (2)(c) or (3)(c) as follows:

(a) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in par. (b).

(b) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(6) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this chapter, subsequent inspection and monitoring may be performed at intervals longer than one year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(a) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(b) Develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable section of this chapter as frequently as practicable during those times when a worker can safely access the cover.

NR 633.09 STANDARDS: CONTAINERS. This section applies to the control of air pollutant emissions from containers for which s. NR 633.05(1) references the use of this section for air emission control.

(1) GENERAL REQUIREMENTS. (a) The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in par. (b) apply to the container.

1. For a container having a design capacity greater than 0.1 $m^3$ and less than or equal to 0.46 $m^3$, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in sub. (2).

2. For a container having a design capacity greater than 0.46 $m^3$ that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in sub. (2).

3. For a container having a design capacity greater than 0.46 $m^3$ that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in sub. (3).

(b) When a container having a design capacity greater than 0.1 $m^3$ is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 3 standards specified in sub. (4) at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

(2) CONTAINER LEVEL 1 STANDARDS. (a) A container using Container Level 1 controls is one of the following:

1. A container that meets the applicable U.S. department of transportation (DOT) regulations on packaging hazardous materials for transportation as specified in sub. (5).

2. A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps or other open spaces into the interior of the container. The cover may be a separate cover installed on the container or may be an integral part of the container structural design.

Note: Examples of separate covers installed on the container are a lid on a drum or a suitably secured tarp on a roll-off box. Examples of covers which are an integral part of the container structural design are a "portable tank" or a bulk cargo container equipped with a screw-type cap.

3. An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere.

Note: One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(b) A container used to meet the requirements of par. (a)2. or 3. shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors which shall be considered in selecting the materials of construction and designing the cover and closure devices shall include organic vapor permeability, the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture and sunlight; and the operating practices for which the container is intended to be used.

(c) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

1. Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

a. In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

b. In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

2. Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

a. For the purpose of meeting the requirements of this section, an empty container, as defined in s. NR 605.06, may be open to the atmosphere at any time.

Note: As used in this section, "open to the atmosphere at any time" means that covers and closure devices are not required to be secured in the closed position on an empty container.

b. In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in s. NR 605.06, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

3. Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

Note: Examples of routine activities other than transfer of hazardous waste include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container.

4. Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the design specifications of the container. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices or other requirements for the safe handling of flammable, ignitable, explosive, reactive or hazardous materials.

Note: Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

5. Opening of a safety device is allowed at any time conditions require doing so to avoid an unsafe condition.

(d) The owner or operator of containers using Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

1. In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not

emptied within 24 hours after the container is accepted at the facility, the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with subd. 3.

Note: The phrase "the container is not emptied" means that the container does not meet the conditions for an empty container in s. NR 605.06.

2. In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with subd. 3.

3. When a defect is detected for the container, cover or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container may not be used to manage hazardous waste until the defect is repaired.

(e) The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 $m^3$ or greater, which do not meet applicable DOT regulations as specified in sub. (5).

(3) CONTAINER LEVEL 2 STANDARDS. (a) A container using Container Level 2 controls is one of the following:

1. A container that meets the applicable U.S. department of transportation (DOT) regulations on packaging hazardous materials for transportation as specified in sub. (5).

2. A container that operates with no detectable organic emissions and determined in accordance with the procedure specified in sub. (6).

3. A container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in sub. (7).

(b) Transfer of hazardous waste in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive or other hazardous materials.

Note: Examples of container loading procedures that the EPA considers to meet the requirements of this paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

(c) Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

1. Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

a. In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

b. In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

2. Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

a. For the purpose of meeting the requirements of this section, an empty container, as defined in s. NR 605.06, may be open to the atmosphere at any time.

Note: As used in this section, "open to the atmosphere at any time" means that covers and closure devices are not required to be secured in the closed position on an empty container.

b. In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container, as defined in s. NR 605.06, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

3. Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

Note: Examples of routine activities other than transfer of hazardous waste include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container.

4. Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices or other requirements for the safe handling of flammable, ignitable, explosive, reactive or hazardous materials.

Note: Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

5. Opening of a safety device is allowed at any time conditions require doing so to avoid an unsafe condition.

(d) The owner or operator of containers using Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

1. In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container arrives at the facility, the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subd. 3.

Note: The phrase "the container is not emptied" means that the container does not meet the conditions for an empty container in s. NR 605.06.

2. In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12

months, to check for visible cracks, holes, gaps or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subd. 3.

3. When a defect is detected for the container, cover or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container may not be used to manage hazardous waste until the defect is repaired.

(4) CONTAINER LEVEL 3 STANDARDS. (a) A container using Container Level 3 controls is one of the following:

1. A container that is vented directly through a closed-vent system to a control device in accordance with par. (b)2.

2. A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with par. (b)1. and 2.

(b) The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

1. The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

2. The closed-vent system and control device shall be designed and operated in accordance with the s. NR 633.10.

(c) Safety devices may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with par. (b).

(d) Owners and operators using Container Level 3 controls in accordance with this chapter shall inspect and monitor the closed-vent systems and control devices as specified in s. NR 633.10.

(e) Owners and operators that use Container Level 3 controls in accordance with the provisions of this chapter shall prepare and maintain the records specified in s. NR 633.12(4).

(5) U.S. DEPARTMENT OF TRANSPORTATION (DOT) REGULATIONS ON PACKAGING HAZARDOUS MATERIALS FOR TRANSPORTATION. For the purpose of compliance with sub. (2)(a)1. or (3)(a)1., containers shall be used that meet the applicable U.S. department of transportation (DOT) regulations on packaging hazardous materials for transportation as follows:

(a) The container meets the applicable requirements specified in 49 CFR part 178 -- Specifications for Packaging or 49 CFR part 179 -- Specifications for Tank Cars.

(b) Hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B -- Exemptions; 49 CFR part 172 -- Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173 -- Shippers -- General Requirements for Shipments and Packages; and 49 CFR part 180 -- Continuing Qualification and Maintenance of Packagings.

(c) For the purpose of complying with this chapter, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in par. (d).

(d) For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this chapter, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

(6) PROCEDURES FOR DETERMINING THAT A CONTAINER OPERATES WITH NO DETECTABLE ORGANIC EMISSIONS. The owner or operator shall use the procedure specified in s. NR 633.06(4) for determining a container operates with no detectable organic emissions for the purpose of complying with sub. (3)(a)2.

(a) Each potential leak interface on the container, its cover and associated closure devices, as applicable to the container, shall be checked.

Note: A "potential leak interface" is a location where organic vapor leakage could occur. Potential leak interfaces that are associated with containers include, but are not limited to: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(b) The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(7) PROCEDURE FOR DETERMINING A CONTAINER TO BE VAPOR-TIGHT USING METHOD 27 OF 40 CFR PART 60, APPENDIX A FOR THE PURPOSE OF COMPLYING WITH SUB. (3)(A)3. (a) In conducting a test to determine whether or not a container is vapor-tight, an owner or operator shall perform the test in accordance with Method 27 of 40 CFR part 60, appendix A.

(b) A pressure measurement device shall be used that has a precision of ±2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(c) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

NR 633.10 STANDARDS: CLOSED-VENT SYSTEMS AND CONTROL DEVICES. This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this chapter.

(1) The closed-vent system shall meet the following requirements:

(a) The closed-vent system shall route the gases, vapors and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in sub. (3).

(b) The closed-vent system shall be designed and operated in accordance with the requirements specified in s. NR 631.06(2).

(c) If the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in subd. 1. or a seal or locking device as specified in subd. 2.

Note: For the purpose of complying with this paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring-loaded pressure relief valves and other fittings used for safety purposes are not considered to be bypass devices.

1. If a flow indicator is used to comply with this paragraph, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

2. If a seal or locking device is used to comply with this paragraph, the device shall be placed on the valve handle, damper lever or other mechanism by which the bypass device position is controlled when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

Note: Examples of a seal or locking device include, but are not limited to, a car-seal or a lock-and-key configuration valve.

(d) The closed-vent system shall be inspected and monitored by the owner or operator in accordance with the procedure specified in s. NR 631.06(2)(k).

(2) The control device shall meet the following requirements:

(a) The control device shall be one of the following devices:

1. A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95% by weight;

2. An enclosed combustion device designed and operated in accordance with the requirements of s. NR 631.06(2)(c); or

3. A flare designed and operated in accordance with the requirements of s. NR 631.06(2)(d).

(b) An owner or operator who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the subds. 1. to 6.

1. Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of par. (a)1., 2. or 3., as applicable, may not exceed 240 hours per year.

2. The specifications and requirements in par. (a)1., 2. or 3. for control devices do not apply during periods of planned routine maintenance.

3. The specifications and requirements in par. (a)1., 2. or 3. for control devices do not apply during a control device system malfunction.

4. The owner or operator shall demonstrate compliance with the requirements of par. (a)1. by recording the information specified in s. NR 633.12(5)(a)5.

Note: For purposes of this subdivision, compliance with the requirements of par. (a)1. means planned routine maintenance of a control device, during which the control device does not meet the specifications of par. (a)1., 2. or 3., as applicable, may not exceed 240 hours per year.

5. The owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

6. The owner or operator shall operate the closed-vent system such that gases, vapors or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction except in cases when it is necessary to vent the gases, vapors or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.

Note: In this subdivision, "periods of planned maintenance or control device system malfunction" means periods when the control device is not operating or not operating normally.

(c) The owner or operator using a carbon adsorption system to comply with par. (a) shall operate and maintain the control device in accordance with the following requirements:

1. Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of s. NR 631.06(2)(g) or (h).

2. All carbon removed from the control device shall be managed in accordance with the requirements of s. NR 631.06(2)(m).

(d) An owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser or carbon adsorption system to comply with par. (a) shall operate and maintain the control device in accordance with the requirements of s. NR 631.06(2)(j).

(e) The owner or operator shall demonstrate that a control device achieves the performance requirements of par. (a) as follows:

1. An owner or operator shall demonstrate using either a performance test as specified in subd. 3. or a design analysis as specified in subd. 4. the performance of each control device except for the following:

a. A flare;

b. A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

c. A boiler or process heater into which the vent stream is introduced with the primary fuel;

d. A boiler or industrial furnace burning hazardous waste for which the owner or operator has been issued a final permit under 40 CFR part 270 and has designed and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H; or

e. A boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in accordance with the interim status requirements of 40 CFR part 266, subpart H.

2. An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in s. NR 631.06(2)(e).

3. For a performance test conducted to meet the requirements of subd. 1., the owner or operator shall use the test methods and procedures specified in s. NR 631.07(3).

4. For a design analysis conducted to meet the requirements of subd. 1., the design analysis shall meet the requirements specified in s. NR 631.08(2)(d)3.

5. The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of par. (a) based on the total quantity of organic compounds vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery and carbon disposal.

(f) If the owner or operator and the department do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with

the requirements of par. (e)3. The department may choose to have an authorized representative observe the performance test.

(g) The control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in s. NR 631.06(2)(f)2. and (k). The readings from each monitoring device required by s. NR 631.06(2)(f)2. shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of this section.

NR 633.11 INSPECTION AND MONITORING REQUIREMENTS. (1) The owner or operator shall inspect and monitor air emission control equipment used to comply with this chapter in accordance with the applicable requirements specified in ss. NR 633.07 to 633.10.

(2) The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by sub. (1). The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under s. NR 630.15.

NR 633.12 RECORDKEEPING REQUIREMENTS. Each owner or operator of a facility subject to this chapter shall record and maintain the information specified in this section, as applicable to the facility. Except for air emission control equipment design documentation and information required by sub. (8), records required by this section shall be maintained in the operating record for a minimum of 3 years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by sub. (8) shall be maintained in the operating record for as long as the tank or container is not using air emission controls specified in ss. NR 633.07 to 633.10 in accordance with the conditions specified in s. NR 633.07(3).

(1) The owner or operator of a tank using air emission controls in accordance with s. NR 633.07 shall prepare and maintain records for the tank that include the following information:

(a) For each tank using air emission controls in accordance with the requirements of s. NR 633.07, the owner or operator shall record:

1. A tank identification number or other unique identification description as selected by the owner or operator.

2. A record for each inspection required by s. NR 633.07 that includes the following information:

a. The date the inspection was conducted.

b. For each defect detected during the inspection, the location of the defect, a description of the defect and the date of detection and corrective action taken to repair the

defect. In the event that repair of the defect is delayed in accordance with s. NR 633.07, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(b) In addition to the information required by par. (a), the owner or operator shall record the following information, as applicable to the tank:

1. The owner or operator using a fixed roof to comply with the Tank Level 1 control requirements specified in s. NR 633.07(2) shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of s. NR 633.07(2). The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

2. The owner or operator using an internal floating roof to comply with the Tank Level 2 control requirements specified in s. NR 633.07(4) shall prepare and maintain documentation describing the floating roof design.

3. Owners and operators using an external floating roof to comply with the Tank Level 2 control requirements specified in s. NR 633.07(5) shall prepare and maintain the following records:

a. Documentation describing the floating roof design and the dimensions of the tank.

b. Records for each seal gap inspection required by s. NR 633.07(5)(c) describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in s. NR 633.07(5)(a), the records shall include a description of the repairs that were made, the date the repairs were made and the date the tank was emptied, if necessary.

4. Each owner or operator using an enclosure to comply with the Tank Level 2 control requirements specified in s. NR 633.07(8) shall prepare and maintain the following records:

a. Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

b. Records required for the closed-vent system and control device in accordance with sub. (4).

(2) The owner or operator of a surface impoundment using air emission controls in accordance with s. NR 633.08 shall prepare and maintain records for the surface impoundment that include the following information:

(a) A surface impoundment identification number or other unique identification description as selected by the owner or operator.

(b) Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in s. NR 633.08(2).

(c) A record for each inspection required by s. NR 633.08 that includes the following information:

1. Date inspection was conducted.

2. For each defect detected during the inspection, the location of the defect, a description of the defect and the date of detection and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with s. NR 633.08(5), the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(d) For a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the records specified in sub. (4).

(3) The owner or operator of containers using Container Level 3 air emission controls in accordance with s. NR 633.09 shall prepare and maintain records that include the following information:

(a) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(b) Records required for the closed-vent system and control device in accordance with the requirements of sub. (4).

(4) The owner or operator using a closed-vent system and control device in accordance with s. NR 633.10 shall prepare and maintain records that include documentation for the closed-vent system and control device that includes:

(a) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in par. (b) or by performance tests as specified in par. (c) when the tank, surface impoundment or container is or would be operating at capacity or the highest level reasonably expected to occur.

(b) If a design analysis is used, then design documentation as specified in s. NR 631.08(2)(d). The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with s. NR 631.08(2)(d)3. and certification by the owner or operator that the control equipment meets the applicable specifications.

(c) If performance tests are used, then a performance test plan as specified in s. NR 631.08(2)(c) and all test results.

(d) Information as required by s. NR 631.08(3)(a) and (b), as applicable.

(e) An owner or operator shall record, on a semiannual basis, the information specified in subd. 1. and 2. for those planned routine maintenance operations that would require the control device not to meet the requirements of s. NR 633.10(2)(a)1., 2. or 3., as applicable.

1. A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance and lengths of maintenance periods.

2. A description of the planned routine maintenance that was performed for the control device during the previous 6-month period. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of s. NR 633.10(2)(a)1., 2. or 3., as applicable, due to planned routine maintenance.

(f) An owner or operator shall record the information specified in subd. 6.a. to c. for those unexpected control device system malfunctions that would require the control device not to meet the requirements of s. NR 633.10(2)(a)1., 2. or 3., as applicable.

1. The occurrence and duration of each malfunction of the control device system.

2. The duration of each period during a malfunction when gases, vapors or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

3. Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(g) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with s. NR 633.10(2)(c)2.

(5) The owner or operator of a tank, surface impoundment or container exempted from standards in accordance with the s. NR 633.05(2) shall prepare and maintain the following records, as applicable:

(a) For tanks, surface impoundments or containers exempted under the hazardous waste organic concentration conditions specified in s. NR 633.05(2)(a) or (b), the owner or operator shall record the information used for each waste determination, including test results, measurements, calculations and other documentation, in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time and location that each waste sample is collected in accordance with s. NR 633.06.

(b) For tanks, surface impoundments or containers exempted under the provisions of s. NR 633.05(2)(b)7. or 8., the owner or operator shall record the identification number for the incinerator, boiler or industrial furnace in which the hazardous waste is treated.

(6) An owner or operator designating a cover as "unsafe to inspect and monitor" pursuant to s. NR 633.07(11) or 633.08(6) shall record in a log that is kept in the facility operating record the following information:

(a) the identification numbers for waste management units with covers that are designated as "unsafe to inspect and monitor,"

(b) the explanation for each cover stating why the cover is unsafe to inspect and monitor, and

(c) the plan and schedule for inspecting and monitoring each cover.

(7) The owner or operator of a facility that is subject to this chapter and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of this chapter by documentation either pursuant to this chapter, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this chapter.

(8) For each tank or container not using air emission controls specified in ss. NR 633.07 to 633.10 in accordance with the conditions specified in s. NR 633.02(4), the owner or operator shall record and maintain the following information:

(a) A list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in s. NR 633.02(4)(a).

(b) A description of how the hazardous waste containing the organic peroxide compounds identified in par. (a) are managed at the facility in tanks and containers. This description shall include the following information:

1. For the tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe for each tank:

a. A facility identification number for the tank;

b. The purpose and placement of this tank in the management train of this hazardous waste; and

c. The procedures used to ultimately dispose of the hazardous waste managed in the tanks.

2. For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe:

a. A facility identification number for the container or group of containers;

b. The purpose and placement of this container, or group of containers, in the management train of this hazardous waste; and

c. The procedures used to ultimately dispose of the hazardous waste handled in the containers.

(c) An explanation of why managing the hazardous waste containing the organic peroxide compounds identified in par. (a) in the tanks and containers as described in par. (b) would create an undue safety hazard if the air emission controls, as required under ss. NR 633.07 to 633.10, are installed and operated on these waste management units. This explanation shall include the following information:

1. For tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain:

a. How use of the required air emission controls on the tanks would affect the tank design features and facility operating procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the tanks; and

b. Why installation of safety devices on the required air emission controls, as allowed under this chapter, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

2. For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain:

a. How use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers; and

b. Why installation of safety devices on the required air emission controls, as allowed under this chapter, will not address those situations in which evacuation of containers equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

NR 633.13 REPORTING REQUIREMENTS. (1) Each owner or operator managing hazardous waste in a tank, surface impoundment or container exempted from using air emission controls under the provisions of s. NR 633.05(2) shall report to the department each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in s. NR 633.05(2)(a) or (b), as applicable. The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

Note: Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than 500 ppmw at the point of waste origination; or placing in the waste management unit a treated hazardous waste of which the organic content has been reduced by an organic destruction or removal process that fails to achieve the applicable conditions specified in s. NR 633.05(2)(b)1. to 6.

(2) Each owner or operator using air emission controls on a tank in accordance with s. NR 633.07(2) shall report to the department each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in s. NR 633.07(1). The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

APPENDIX I to ch. NR 633--COMPOUNDS WITH HENRY'S LAW CONSTANT LESS THAN 0.1 Y/X
[At 25 degrees C]

| Compound name | CAS No. |
|---|---|
| TRICHLORO(1,1,2)TRIFLUORO | |
| FORMALDEHYDE | 50-00-0 |
| HYDROCYANIC ACID | 74-90-8 |
| FORMAMIDE | |
| QUINONE | |
| DIMETHYL HYDRAZINE(1,1) | 57-14-7 |
| METHYL ACRYLATE | 96-33-3 |
| ACETAMIDE | 60-35-5 |
| METHYL HYDRAZINE | 60-34-4 |
| DIETHYLHYDRAZINE N,N | |
| FORMIC ACID | 64-18-6 |
| DIMETHYL DISULFIDE | 624-92-0 |
| PHORATE | 298-02-2 |

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[At 25 degrees C]

| Compound name | CAS No. |
|---|---|
| HYDRAZINE | 302-01-2 |
| LEAD SUBACETATE | 1335-32- |
| LEAD ACETATE | 301-04-2 |
| NAPHTHOL,beta- | 135-19-3 |
| DIETHYLENE GLYCOL MONOMETHYL ETHER | |
| NITROSODIMETHYLAMINE N | 62-75-9 |
| DIETHYLENE GLYCOL MONOBUTYL ETHER | |
| ACETYL-2-THIOUREA, 1- | 591-08-2 |
| ACRYLIC ACID | 79-10-7 |
| ETHYLENE GLYCOL MONOPHENYL ETHER | |
| ETHYLENE GLYCOL MONOMETHYL ETHER | |
| DIMETHYL FORMAMIDE | 68-12-2 |
| DIETHYLENE GLYCOL DIMETHYL ETHER | |
| PROPIOLACTONE b | 57-57-8 |
| ETHYLENE GLYCOL MONOPROPYL ETHER | |
| METHYL SULFURIC ACID | |
| METHYL THIOPHENOL 4 | 106-45-6 |
| ETHYLENE GLYCOL MONOETHYL ETHER Cellosol | |
| DIMETHYL CARBAMOYL CHLORIDE | |
| ETHYLENE GLYCOL MONOETHYL ETHER ACETATE | |
| BUTYL CELLOSOLVE | 111-76-2 |
| TOLUENE DIAMINE(2,4) | 95-80-7 |
| DIMETHYLSULFOXIDE | |
| ANILINE | 62-53-3 |
| DIETHYLENE GLYCOL | 111-46-6 |
| ETHYLPHENOL, 3- | 620-17-7 |
| GYLCIDOL | 556-52-5 |
| BUTYRIC ACID | 107-92-6 |
| NITROSO-N-METHYLUREA N | 684-93-5 |
| MONOMETHYL FORMANIDE | |
| ETHYL CARBAMATE | |
| ETHYL MORPHOLINE, ethyl diethylene oxime | |
| ETHANOLAMINE(mono-) | 141-43-5 |
| ETHYLENE THIOUREA | |
| PHENOL | 108-95-2 |
| ETHYLENE GLYCOL MONOBUTYL ETHER | |
| CRESOL | 1319-77- |

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[At 25 degrees C]

| Compound name | CAS No. |
|---|---|
| PROPYLENE GLYCOL | 57-55-6 |
| TRIETHYLENE GLYCOL DIMETHYL ETHER | . . . . . |
| CRESOL(-o) | 95-48-7 |
| TOLUIDINE(m) | . . . . . |
| CHLOROPHENOL-4 | 106-48-9 |
| BENZYL ALCOHOL | 100-51-6 |
| ACETALDOL | . . . . . |
| CHLOROACETIC ACID | 79-11-8 |
| GLYPHOSATE | . . . . . |
| ETHYLENE GLYCOL | 107-21-1 |
| ADENINE | 73-24-5 |
| HEXAMETHYLPHOSPHORAMIDE | . . . . . |
| DIETHYLENE GLYCOL MONOETHYL ETHER ACETAT | . . . . . |
| DICHLOROPHENOL 2,5 | . . . . . |
| CRESOL(-p) | 106-44-5 |
| NITROSOMORPHOLINE | . . . . . |
| QUINOLINE | 91-22-5 |
| DIMETHYLSULFONE | . . . . . |
| CRESOL(-m) | 108-39-4 |
| TOLUENE DIISOCYANATE(2,4) | 584-84-9 |
| HYDROXY-(2)-PROPIONITRILE | 109-78-4 |
| HEXANOIC ACID | 142-62-1 |
| FUMARIC ACID | 110-17-8 |
| METHANE SULFONIC ACID | 75-75-2 |
| MESITYL OXIDE | 141-79-7 |
| CHLORO-2,5-DIKETOPYRROLIDINE3 | . . . . . |
| PYRIDINIUM BROMIDE | . . . . . |
| METHYLIMINOACETIC ACID | . . . . . |
| DIMETHOATE | 60-51-5 |
| GUANIDINE, NITROSO | 674-81-7 |
| PHENYLACETIC ACID | 103-82-2 |
| BENZENE SULFONIC ACID | . . . . . |
| ACETYL-5-HYDROXYPIPERIDINE 3 | . . . . . |
| LEUCINE | 61-90-5 |
| alpha-PICOLINE | 1333-41- |
| METHYL-2-METHOXYAZIRIDINE 1 | . . . . . |
| BROMOCHLOROMETHYL ACETATE | . . . . . |

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[At 25 degrees C]

| Compound name | CAS No. |
|---|---|
| DICHLOROTETRAHYDROFURAN 3,4 | 3511-19- |
| ACETYLPIPERIDINE 3 | 618-42-8 |
| CHLORO-1,2-ETHANEDIOL | . . . . . |
| CYANIDE | 57-12-5 |
| NIACINAMIDE | 98-92-0 |
| METHOXYPHENOL P | 150-76-5 |
| METHYLFURFURAL 5 | 620-02-0 |
| GLYCINAMIDE | 598-41-4 |
| SUCCINIMIDE | 123-56-8 |
| SULFANILIC ACID | 121-47-1 |
| MALEIC ACID | 110-16-7 |
| AMETRYN | . . . . . |
| DIMETHYLPHENOL(3,4) | . . . . . |
| ANISIDINE,o- | 90-04-0 |
| TETRAETHYLENE PENTAMINE | . . . . . |
| DIETHYLENE GLYCOL MONOETHYL ETHER | . . . . . |
| CHLORACETOPHENONE,2- | 93-76-5 |
| DIPROPYLENE GLYCOL | . . . . . |
| HEXAMETHYLENE 1,6 DIISOCYANATE | . . . . . |
| NEOPENTYL GLYCOL | 126-30-7 |
| BHC,gamma- | 58-89-9 |
| PHENYLENE DIAMINE(-m) | 108-45-2 |
| CHLOROHYDRIN, a 3 CHLORO 1,2 PROPANEDIOL | . . . . . |
| XYLENOL(3,4) | 95-65-8 |
| DINITRO-o-CRESOL(4,6) | 534-52-1 |
| PROPORUR (Baygon) | . . . . . |
| DIBROMO-4-HYDROXYBENZONITRILE(3,5) | . . . . . |
| CATECHOL | 120-80-9 |
| CHLOROANILINE,p- | 106-47-8 |
| DICHLORVOS | . . . . . |
| ACRYLAMIDE | 79-06-1 |
| THIOSEMICARBAZIDE | 79-19-6 |
| TRIETHANOLAMINE | 102-71-6 |
| PENTAERYTHRITOL | 115-77-5 |
| PHENYLENE DIAMINE(-o) | 95-54-5 |
| CAPROLACTAM | . . . . . |
| BENZOIC ACID | 65-85-0 |

APPENDIX I to ch. NR 633--COMPOUNDS WITH HENRY'S LAW CONSTANT LESS THAN 0.1 Y/X
[At 25 degrees C]

| Compound name | CAS No. |
|---|---|
| TOLUENEDIAMINE(3,4) | 496-72-0 |
| TRIPROPYLENE GLYCOL | . . . . . |
| PHENYLENE DIAMINE(-p) | 106-50-3 |
| TEREPHTHALIC ACID | . . . . . |
| NITROGLYCERIN | 55-63-0 |
| CHLORO(-p)CRESOL(-m) | 59-50-7 |
| DICHLOROANILINE 2,3- | . . . . . |
| NITROANILINE(-o) | 88-74-4 |
| DIETHYL (N,N) ANILINE | 91-66-7 |
| NAPHTHOL,alpha- | 90-15-3 |
| AMINOPYRIDINE,4- | 504-24-5 |
| ADIPONITRILE | . . . . . |
| BROMOXYNIL | . . . . . |
| PHTHALIC ANHYDRIDE | 85-44-9 |
| MALEIC ANHYDRIDE | 108-31-6 |
| NITROPHENOL,2- | 88-75-5 |
| ACETYLAMINOFLUORENE,2 | 53-96-3 |
| PROPANE SULTONE,1,3- | 1120-71- |
| CITRIC ACID | 77-92-9 |
| EPINEPHRINE | 51-43-4 |
| CHLOROPHENOL POLYMERS | . . . . . |
| CREOSOTE | 8001-58- |
| FLUOROACETIC ACID, SODIUM SALT | 62-74-8 |
| SODIUM ACETATE | . . . . . |
| SUCCINIC ACID | 110-15-6 |
| SODIUM FORMATE | 141-53-7 |
| PHENACETIN | 62-44-2 |
| HYDROQUINONE | 123-31-9 |
| DIMETHYLAMINOAZOBENZENE,4- | 60-11-7 |
| METHYLENE DIPHENYL DIISOCYANATE | . . . . . |
| OXALIC ACID | 144-62-7 |
| BENZO(A)PYRENE | 50-32-8 |
| DICHLOROBENZONITRILE,2,6- | 1194-65-6 |
| AMINOBIPHENYL,4- | 92-67-1 |
| NAPHTHYLAMINE,alpha- | 134-32-7 |
| DIETHANOLAMINE | . . . . . |
| METHYLENEDIANILINE 4,4 | . . . . . |

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[At 25 degrees C]

| Compound name | CAS No. |
|---|---|
| NAPHTHYLAMINE,beta- | 91-59-8 |
| METHYLENE DIPHENYLAMINE (MDA) | . . . . . |
| GLUTARIC ACID | 110-94-1 |
| RESORCINOL | 108-46-3 |
| TOLUIC ACID(para-) | 99-94-5 |
| GUTHION | . . . . . |
| DIMETHYL PHTHALATE | 131-11-3 |
| GLYCERIN (GLYCEROL) | 56-81-5 |
| THIOFANOX | 39196-18 |
| DIBUTYLPHTHALATE | 84-74-2 |
| ALDICARB | 116-06-3 |
| NITROPHENOL,4- | 100-02-7 |
| METHYLENE-BIS (2-CHLOROANILINE),4,4'- | 101-14-4 |
| DIPHENYLHYDRAZINE(1,2) | 122-66-7 |
| METHOMYL | 16752-77 |
| MALATHION | 121-75-5 |
| PARATHION | 56-38-2 |
| ADIPICACID | 124-04-9 |
| ALACHLOR | 15972-60 |
| STRYCHNIDIN-10-ONE,2,3-DIMETHOXY- | 357-57-3 |
| TOLUENEDIAMINE(2,6) | 823-40-5 |
| CUMYLPHENOL-4 | 27576-86 |
| DIAZINON | . . . . . |
| BENZENE ARSONIC ACID | 98-05-5 |
| WARFARIN | 81-81-2 |
| METHYL PARATHION | 298-00-0 |
| DIETHYLTHIOPHOSPHATEBENZO M ETHYL PETHER | . . . . . |
| PHENYL MERCURIC ACETATE | 62-38-4 |
| DIETHYL PROPIONAMIDE,2aN | 15299-99 |
| CHLOROBENZOPHENONE (PARA) | 134-85-0 |
| THIOUREA,1-(o-CHLOROPHENYL)- | 5344-82- |
| DIMETHYLBENZIDINE3,3 | . . . . . |
| DICHLORO-(2,6)-NITROANILINE(4) | 99-30-9 |
| CELLULOSE | 9000-11- |
| CELL WALL | . . . . . |
| BENZIDINE | 92-87-5 |
| TETRAETHYLDITHIOPYROPHOSPHATE | 3689-24- |

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[At 25 degrees C]

| Compound name | CAS No. |
|---|---|
| NABAM | |
| ATRAZINE | 1912-24- |
| ENDRIN | 72-20-8 |
| BIS(2-ETHYLHEXYL) PHTHALATE | 117-81-7 |
| BENZO(A)ANTHRACENE | 56-55-3 |
| CYANOMETHYL BENZOATE 4 | |
| ANTHRAQUINONE | 84-65-1 |
| STRYCHNINE | 57-24-9 |
| SIMAZINE | 122-34-9 |
| PYRENE | 129-00-0 |
| CHLOROBENZYLATE | 510-15-6 |
| DIMETHYLBENZ(A) ANTHRACENE(7,12) | 57-97-6 |
| INDENO(1,2,3-cd)-PYRENE | 193-39-5 |
| CHRYSENE | 218-01-9 |
| BENZO(ghi)PERYLENE | 191-24-2 |
| BENZO(k) FLUORANTHENE | 207-08-9 |
| DIBENZO(a,h)ANTHRACENE | 53-70-3 |
| DIETHYL PHOSPHOROTHIOATE | 126-75-0 |

SECTION 124. NR 635.10(1) and (2) are amended to read:

NR 635.10(1) DESIGN MANAGEMENT ZONE. The design management zone and waste boundary are defined in s. NR ~~140.22(5)(a)~~ 140.22(3)(a). The design management zone extends horizontally 0 feet beyond the waste boundary for facilities subject to the requirements of ss. NR 635.05 to 635.15, and 300 feet beyond the waste boundary for facilities subject to the requirements of s. NR 635.16.

(2) CHANGES TO THE DESIGN MANAGEMENT ZONE. The department may consider an expansion or reduction of the design management zone for facilities subject to the requirements of s. NR 635.16 in accordance with s. NR ~~140.22(5)(b)~~ 140.22(3)(b). The factors that shall be considered by the department are listed in s. ~~NR 140.22(5)(c)~~ NR 140.22(3)(c) and (d). An owner or operator of a facility may submit a written request for approval of an expansion or reduction of the design management zone. The request shall include an evaluation of the factors listed in s. NR ~~140.22(5)(c)~~ 140.22(3)(c) and (d).

SECTION 125. NR 635.12(14)(c)1. and (c)2. are amended to read:

NR 635.12(14)(c)1. Hydrogeologic conditions do not allow the owner or operator to determine what wells are upgradient; and

2. Sampling at other wells shall provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells~~; or~~ .

SECTION 126. NR 635.12(14)(c)3. is renumbered NR 635.12(14)(cm) and is amended to read:

NR 635.12(14)(cm) Sampling at other wells ~~will~~ shall allow for the detection of contamination when hazardous waste or hazardous constituents have migrated from the design management zone to the uppermost aquifer.

SECTION 127. NR 635.18(22)(e)5. (Note) is repealed.

SECTION 128. NR 635 Appendix 1 Note 5 is amended to read:

NR 635 Appendix 1[5] Suggested methods refer to analytical procedure numbers used in EPA ~~Report~~ Publication SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," ~~third edition, November 1986~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c). Analytical details can be found in SW-846 and in documentation on file with EPA. ~~CAUTION: The methods listed are representative SW-846 procedures and may not always be the most suitable methods for monitoring an analyte under the regulations~~ The packed gas 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.

~~Note: The publication SW-846 may be obtained from:~~

~~National Technical Information Service~~
~~5285 Port Royal Road~~
~~Springfield, VA 22161~~
~~(703) 487-4600~~

~~This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.~~

SECTION 129. NR 640.06(2)(h) is created to read:

NR 640.06(2)(h) Information on air emission control equipment as required in s. NR 633.15.

SECTION 130. NR 640.13(4) is created to read:

NR 640.13(4) All hazardous waste placed in a container shall be managed in accordance with the requirements of chs. NR 631, 632 and 633.

SECTION 131. NR 645.06(1)(i)12. is created to read:

NR 645.06(1)(i)12. Information on air emission control equipment as required in s. NR 633.15.

SECTION 132. NR 645.09(1) is amended to read:

NR 645.09 SECONDARY CONTAINMENT AND DETECTION OF RELEASES. (1) 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 that is designed and constructed to have a continuous base which is free of cracks or gaps and is impervious to the material to be stored or treated, are exempt from the requirements in this section. To demonstrate the absence or presence of free liquids in the stored or treated waste, the following test shall be used: ~~EPA~~ method 9095, paint filter liquids test, as described in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c).

~~Note: Publication SW-846 may be obtained from:~~

~~Superintendent of Documents~~
~~U.S. Government Printing Office~~
~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.~~

SECTION 133. NR 645.10(6) is created to read:

NR 645.10(6) All hazardous waste placed in a tank or tank system shall be managed in accordance with the requirements of chs. NR 631, 632 and 633.

SECTION 134. NR 645.16(3)(e) is amended to read:

NR 645.16(3)(e) Based on the site visit under par. (d), the department may require additional information for the feasibility and plan of operation report as provided in ss. NR 660.08 to ~~660.107~~ 660.11.

SECTION 135. Chapter NR 655(Title) is amended to read:

NR 655(Title) Waste Pile and ~~Container~~ Containment Buildings Standards

SECTION 136. NR 656.07(1)(a) and (4)(a)(intro.) are amended to read:

NR 656.07(1)(a) The requirements of this section apply to the owners and operators of facilities that use drip pads to convey treated wood drippage, precipitation or surface water run-off to an associated collection system. Existing and new drip pads are defined in s. NR 656.03. The requirements of ~~s. NR 645.07(4)(b)3.~~ sub. (4)(b)3. to install a leak collection system apply to new drip pads constructed after December 24, 1992 and those F032 drip pads for which the owner or operator entered into binding financial or other agreements for construction prior to December 24, 1992.

(4)(a)(intro.) The owner or operator shall obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified professional engineer registered in the state of Wisconsin that attests to the results of the evaluation. The assessment shall be reviewed, updated and recertified annually. The evaluation shall document the extent to which the drip pad meets the design and operating standards of this section, except for par. (b). Drip pads shall:

SECTION 137. NR 660.04(1) is amended to read:

NR 660.04(1) A surface impoundment which has its discharges regulated under ch. ~~147~~ 283, Stats., is excluded from the requirements of this chapter, if the owner or operator complies with ss. NR 630.04(3) and ~~660.19~~ 660.24.

SECTION 138. NR 660.13(1)(j)20. is created to read:

NR 660.13(1)(j)20. Information on air emission control equipment as required in s. NR 633.15.

SECTION 139. NR 660.18(7) is amended to read:

NR 660.18(7) Before bulk or non-containerized liquid waste or waste containing free liquids that are not hazardous waste are placed in a landfill they shall be treated or stabilized, using a method that does not use absorbents or adsorbents, so that free liquids are no longer present. To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test shall be used: ~~EPA~~ method 9095, paint filter liquids test, as described in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c).

~~Note: Publication SW-846 may be obtained from:~~

~~Superintendent of Documents~~
~~U.S. Government Printing Office~~
~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state, and the revisor of statutes.~~

Note: Methods that do not use absorbents or adsorbents to treat or stabilize liquid waste are described in statutory interpretative guidance documents available from EPA.

SECTION 140. NR 660.18(40) is created to read:

NR 660.18(40) A surface impoundment shall be managed in accordance with the requirements of chs. NR 631, 632 and 633.

SECTION 141. NR 660.22(2)(b) is amended to read:

NR 660.22(2)(b) Maintain and monitor the leak detection system in accordance with s. NR ~~660.13(3)(c) and (10(b)2.~~ 660.18(11)(b), and comply with all other applicable leak detection system requirements of this chapter.

SECTION 142. NR 665.06(1)(d)1.d. and 2. are amended to read:

NR 665.06(1)(d)1.d. An identification of any hazardous organic constituents listed in ch. NR 605, Appendix IV, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in ch. NR 605, Appendix IV, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis shall be identified, and the basis for the exclusion stated. The waste analysis shall rely on analytical techniques specified in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods, ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or other equivalent.

2. An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods specified in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or their equivalent.

~~Note: Publication SW-846 is available from:~~

~~Superintendent of Documents~~

~~U.S. Government Printing Office~~
~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.~~

SECTION 143. NR 665.06(1)(d)10. is created to read:

NR 665.06(1)(d)10. The department shall send a notice to all persons on the facility mailing list in s. NR 680.06(10)(a)3. and to the appropriate units of state and local government in s. NR 680.06(12)(a)4. announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the department has issued the notice. This notice shall be mailed within a reasonable time period before the scheduled trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the department. This notice shall contain all of the following:

a. The name and telephone number of the applicant's contact person.

b. The name and telephone number of the department's contact office.

c. The location where the approved trial burn plan and any supporting documents can be reviewed and copied.

d. A schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for department approval of the plan.

e. An expected time period for commencement and completion of the trial burn.

SECTION 144. NR 665.06(1)(e)1.c. and d. and (4) are amended to read:

NR 665.06(1)(e)1.c. An identification of any hazardous organic constituents listed in ch. NR 605, Appendix IV, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in ch. NR 605, Appendix IV, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis shall be identified and the basis for their exclusion stated. The waste analysis shall rely on analytical techniques specified in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or their equivalent.

d. An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods specified in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition,~~

~~September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c).

~~Note: Publication SW-846 may be obtained from:~~

~~Superintendent of Documents~~
~~U.S. Government Printing Office~~
~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.~~

(4) For the purposes of determining compliance with the performance standards of s. NR 665.09 and determining adequate operating conditions under s. NR 665.09, any person who submits a feasibility and plan of operation report for an existing hazardous waste incinerator operating under an interim license or a variance shall prepare and submit a trial burn plan and perform a trial burn in accordance with subs. (1) (d), (2) and (3) and s. NR 665.07(2). The department shall announce its intention to approve the trial burn plan in accordance with the timing and distribution requirements of sub. (1)(d)10, including the contents of the notice specified in that section. Persons who submit trial burn plans and receive approval before submission of a feasibility and plan of operation report shall complete the trial burns and submit the results, specified in s. NR 665.07 (2), with the feasibility and plan of operation report. If completion of this process conflicts with the date set for submission of the feasibility and plan of operation report, the department shall be notified and may establish a later date for submission of the feasibility and plan of operation report or the trial burn results. Trial burn results shall be submitted prior to the issuance of a license. If the trial burn plan is to be included with the feasibility and plan of operation report, the trial burn shall be conducted and the results submitted within a time period to be specified by the department.

SECTION 145. NR 665.09(16)(a)1. is amended to read:

NR 665.09(16)(a)1. The heat value and thermal stability of the waste in the form and composition in which it shall be burned;

SECTION 146. NR 670.08(intro.) is amended to read:

NR 670.08 MISCELLANEOUS UNIT STANDARDS. A miscellaneous unit shall be located, designed, constructed, operated, maintained and closed in a manner that shall ensure protection of human health and the environment. Licenses for miscellaneous units are to contain terms and provisions necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements and requirements for responses to releases of hazardous waste or

hazardous constituents from the unit. License terms and provisions shall include those requirements of chs. NR 631 to 633, 640 to 665, and ~~ch. NR~~ 680 that are appropriate. Protection of human health and the environment includes, but is not limited to:

SECTION 147. NR 670.10(2) is amended to read:

NR 670.10(2) A miscellaneous unit that is a disposal unit shall be maintained in a manner that complies with s. NR ~~670.06~~ 685.06 during the long-term care period. If a treatment or storage unit has contaminated soils or groundwater that cannot be completely removed or decontaminated during closure, the unit shall also meet the requirements of s. NR ~~670.06~~ 685.06 during the long-term care period. The long-term care plan under s. NR 685.06 and the closure plan under s. NR 685.05 shall specify the procedures that shall be used to satisfy this requirement.

SECTION 148. NR 675.02(3)(Note) is created to read:

NR 675.02(3)Note: The publications containing CFR references, title 42 of the United States code, and the clean water act, referred to in this chapter, may be obtained from:

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954
(202) 512-1800

These documents are available for inspection at the offices of the department, the secretary of state, and the revisor of statutes.

SECTION 149. NR 675.03(1)(Note) is repealed and recreated to read: (The second note to this section is unchanged but is reproduced here.)

NR 675.03(1)Note: The following materials are not debris: any material for which a specific treatment standard is provided in ss. NR 675.20 to 675.28, namely lead acid batteries, cadmium batteries and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by s. NR 675.25 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

Note: A mixture of debris that has not been treated to the standards provided by s. NR 675.25 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

SECTION 150. NR 675.03(1m), (1p), (4m), (7m) and (7p) are created to read:

NR 675.03(1m) "De minimis" means losses from normal material handling operations, such as 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; and rinsate from empty containers or from containers that are rendered empty by that rinsing.

(1p) "End-of-pipe" means the point where effluent is discharged to the environment.

(4m) "Inorganic metal-bearing waste" means waste for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in s. NR 675.06(3)(a) and is specifically listed in ch. NR 675 Appendix VIII.

(7m) "Stormwater impoundments" means surface impoundments which receive wet weather flow, and only receive process waste during wet weather events.

(7p) "Underlying hazardous constituent" means any constituent listed in s. NR 675.28, Table UTS-Universal Treatment Standards, except fluoride, 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 universal treatment standards.

SECTION 151. NR 675.03(8)(intro.) is amended to read:

NR 675.03(8) "Wastewasters" means wastes that contain less than 1% by weight total organic carbon and less than 1% by weight total suspended solids~~, with the following exceptions:~~

SECTION 152. NR 675.03(8)(a) to (c) are repealed.

SECTION 153. NR 675.04(2) is renumbered NR 675.04(5).

SECTION 154. NR 675.04(2), (3) and (4) are created to read:

NR 675.04(2)(a) De minimis losses to wastewater treatment systems of commercial chemical product or chemical intermediates that are ignitable (D001), corrosive (D002), or are organic constituents that exhibit the characteristic of toxicity (D012-D043), and that contain underlying hazardous constituents are not considered to be prohibited wastes.

(b) Land disposal prohibitions for hazardous characteristic wastes do not apply to laboratory wastes displaying the characteristic of ignitability (D001), corrosivity (D002), or organic toxicity (D012-D043) that are mixed with other plant wastewaters at facilities whose ultimate discharge is subject to regulation under ch. 283, Stats., including wastewaters at facilities which have eliminated the discharge of wastewater, provided that either of the following conditions is met:

1. The annualized flow of laboratory wastewater into the facility's headworks does not exceed 1%.

2. The laboratory wastes' combined annualized average concentration does not exceed one part per million in the facility's headworks.

(3) Universal waste handlers and universal waste transporters are exempt from ss. NR 675.07 and 675.30 for the universal wastes which are subject to regulation under ch. NR 690.

(4) De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes. Discharges of laboratory wastes shall not exceed either of the following:

(a) One percent of the total flow of wastewater into the facility's headworks on an annual basis.

(b) A combined annualized average concentration of one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.

SECTION 155. The Notes found at NR 675.05(3)(c), 675.06(2), 675.07(1)(a), (1)(c)2., (1)(d)(intro.), (1)(d)3., (1)(e)(intro.), (1)(e)2., (1)(g), (2)(a), (2)(d)1.b., (2)(e) and (3)(b), 675.11(2), 675.13(2)(c), (4) and (5)(intro.), 675.15(8), 675.20(1), 675.21(1) (the first Note), 675.24(1)(e), 675.30(1)(intro.) and (5) are repealed.

SECTION 156. NR 675.06(1) and (2) are amended to read:

NR 675.06 (1) Except as provided in sub. (2), no generator, transporter, handler or owner or operator of a treatment, storage or disposal facility may in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with ss. NR 675.20 to ~~675.24~~ 675.28, to circumvent the effective date of or to otherwise avoid a prohibition in ss. NR 675.11 to 675.16, or to circumvent a land disposal prohibition imposed by 42 USC 6924.

(2) Dilution of wastes that are hazardous only because they exhibit a characteristic in a treatment system which treats wastes subsequently discharged to a water of the United States pursuant to a permit issued under ~~section 402 of the clean water act~~ s. 283.31, Stats. or which treats wastes for purposes of pretreatment requirements under ~~section 307 of the clean water act~~ ss. 283.11 and 283.21, Stats. is not impermissible dilution for purposes of this section

unless a method has been specified in s. NR ~~675.22~~ 675.20 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

SECTION 157. NR 675.06(3) is created to read:

NR 675.06(3) Combustion of the hazardous wastes associated with the waste codes listed in ch. NR 675 Appendix VIII 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 criteria listed in pars. (a) to (f) and is not otherwise specifically prohibited from combustion:

(a) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard in s. NR 675.28.

(b) The waste consists of organic, debris-like materials, including but not limited to wood, paper, plastic or cloth, contaminated with an inorganic metal-bearing hazardous waste.

(c) The waste, at point of generation, has a heating value of greater than or equal to 5,000 BTU per pound.

(d) The waste is co-generated with wastes for which combustion is a required method of treatment.

(e) The waste is subject to federal or Wisconsin requirements necessitating reduction of organics, including biological agents.

(f) The waste contains greater than 1% total organic carbon (TOC).

SECTION 158. NR 675.07(1) is repealed and recreated to read:

NR 675.07(1)(a) Except as specified in s. NR 675.13, if a generator's waste is listed in s. NR 605.09, the generator shall test its waste or test an extract using the toxicity characteristic leaching procedure, test method 1311 in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or use knowledge of the waste, to determine if the waste is restricted from land disposal under this chapter.

(b) Except as specified in s. NR 675.13, if a generator's waste exhibits one or more of the characteristics in s. NR 605.08, the generator shall test an extract using the toxicity characteristic leaching procedure, test method 1311 in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or use knowledge of the waste, to determine if the waste is restricted from land disposal under this chapter.

(c) The generator shall determine the underlying hazardous constituents that are reasonably expected to be present in the D001, D002 or D012-D043 wastes if the generator determines that any of the following is true:

1. For D001 wastes, the generator's waste exhibits the characteristic of ignitability and is neither in the High TOC Ignitable Liquids Subcategory nor is treated by CMBST or RORGS of s. NR 675.22, Table 1.

2. For D002 wastes, the generator's waste exhibits the characteristic of corrosivity and is prohibited under s. NR 675.17.

3. For D012 to D043 wastes, the generator's waste exhibits the characteristic of organic toxicity and is prohibited under s. NR 675.18.

(d) If a generator determines that it is managing a restricted waste under this chapter and the waste exceeds the applicable treatment standards or it exceeds the applicable prohibition levels in s. NR 675.13 or RCRA section 3004(d), with each shipment of waste the generator shall notify the treatment or storage facility in writing of the appropriate treatment standards in ss. NR 675.20 to 675.28 and any applicable prohibitions in s. NR 675.13 or 42 USC 6924(d).

1. The notice shall include all of the following information:

a. EPA hazardous waste number.

b. The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, and D012-D043. Generators shall also include whether the waste is a nonwastewater or wastewater and indicate the subcategory of the waste, if applicable.

Note: An example of a subcategory of waste is "D003 reactive cyanide".

c. The manifest number associated with the shipment of waste.

d. For hazardous debris, the contaminants subject to treatment as provided by s. NR 675.25 and the following statement:

"This hazardous debris is subject to the alternative treatment standards of s. NR 675.25"; and

e. Waste analysis data, where available.

f. The date the waste is subject to the prohibitions.

2. The generator shall keep a copy of this notice with the generator's copy of the manifest.

(e) If a generator determines that it is managing a restricted waste under this chapter, and determines that the waste may be disposed on land without further treatment, with each shipment of waste the generator shall submit to the treatment, storage or land disposal facility, a notice and a certification stating that the waste meets applicable treatment standards in ss. NR 675.20 to 675.28 and the applicable prohibition levels in s. NR 675.13 or 42 USC 6924(d). Generators of debris that the department has determined does not contain hazardous waste are not subject to these notification and certification requirements.

1. The notice shall include all of the following information:

a. EPA hazardous waste number.

b. The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001 to F005, F039, D001, D002 and D012-D043 and s. NR 675.13 and 42 USC 6924(d). Generators shall also include whether the waste is a nonwastewater or wastewater and indicate the subcategory of the waste, if applicable.

Note: An example of a subcategory of waste is "D003 reactive cyanide".

c. The manifest number associated with the shipment of waste.

d. Waste analysis data, where available.

2. The certification shall be signed by an authorized representative and shall state the following:

"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 ss. NR 675.20 to 675.28 and all applicable prohibitions in s. NR 675.13 or 42 USC 6924 (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."

3. The generator shall keep a copy of this notice and certification with the generator's copy of the manifest.

(f) If a generator's waste is subject to an exemption from a prohibition against the type of land disposal method utilized for the waste, such as, but not limited to, a case-by-case extension under s. NR 675.05(1) or an exemption under s. NR 675.05(2) or a nationwide capacity variance under 40 CFR 268, subpart C, July 1, 1996, with each shipment of waste the generator shall submit a notice to the facility receiving the waste stating that the waste is not prohibited from land disposal.

1. The notice shall include all of the following information:

a. EPA hazardous waste number.

b. The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, and D012-D043. Generators shall also include whether the waste is a nonwastewater or wastewater and indicate the subcategory of the waste, such as "D003 reactive cyanide", if applicable.

c. The manifest number associated with the shipment of waste.

d. Waste analysis data, where available.

e. For hazardous debris, the contaminants subject to treatment, as provided by s. NR 675.25 and the following statement:

"This hazardous debris is subject to the alternative treatment technologies provided by s. NR 675.25."

f. For hazardous debris when using the treatment standards for contaminating wastes in s. NR 675.20, the requirements in subd. 1.a., b., c., d. and g.

g. The date the waste is subject to the prohibition.

2. The generator shall keep a copy of this notice with the generator's copy of the manifest.

(g) If a generator is managing prohibited waste in tanks, containers or containment buildings regulated under s. NR 610.07(2), 610.08(4) or 615.05(6) and is treating the waste in tanks, containers or containment buildings to meet applicable treatment standards specified in ss. NR 675.20 to 675.28, the generator shall develop and follow a written waste analysis plan which describes the procedures that the generator will carry out to comply with the treatment standards. Generators treating hazardous debris under the alternative treatment standards of s. NR 675.25, Table 1 are not subject to these waste analysis requirements. The plan shall be kept on site in the generator's operating record and all of the following requirements shall be met:

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

2. This plan shall be submitted to the department a minimum of 30 days prior to the treatment activity, with delivery verified.

3. Wastes shipped off site pursuant to this paragraph shall comply with the notification requirements of par. (e).

(h) If a generator determines whether the waste is restricted based solely on the generator's knowledge of the waste, all supporting data used to make this determination shall be retained on site in the generator's files. If a generator determines whether the waste is

restricted based on testing this waste or an extract developed using the toxicity characteristic leaching procedure, test method 1311 in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", as incorporated by reference in s. NR 600.10(2)(b)1. and (c), all waste analysis data shall be retained on site in the generator's files.

(i) If a generator determines that it is managing a restricted waste that is excluded from the definition of hazardous or solid waste or exempt from regulation under chs. NR 600 to 685 subsequent to the point of generation, the generator shall place a one-time notice in the facility's file stating the generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from chs. NR 600 to 685 and the disposition of the waste.

(j) Generators shall retain on site a copy of all notices, certifications, demonstrations, waste analysis data and other documentation produced pursuant to this section for at least 5 years from the date that the waste that is the subject of the documentation was last sent to on-site or off-site treatment, storage, or disposal. The 5 year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity. Upon written notice from the department to the generator, the period of retention may be extended beyond 5 years. 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 or exempted from regulation under chs. NR 600 to 685 subsequent to the point of generation.

(k) If a generator is managing a lab pack waste and wishes to use the alternative treatment standard under s. NR 675.22, with each shipment of waste the generator shall submit a notice to the treatment facility in accordance with par. (c), except that underlying hazardous constituents need not be determined. The generator shall also comply with the requirements in pars. (g) and (h), and shall submit the following certification signed by an authorized representative:

"I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contains any wastes identified at ch. NR 675, Appendix III, Wis. Adm. Code. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

SECTION 159. NR 675.07(2)(a), (2)(e)1. and 3. are amended to read:

NR 675.07(2)(a) For wastes with treatment standards expressed as concentrations in the waste extract in s. NR 675.21, the owner or operator of the treatment facility shall test the treatment residues, or an extract of the residues developed using the toxicity characteristic leaching procedure, ~~EPA~~ method 1311 in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c), to ensure that the treatment residues or extract meet the applicable treatment standards.

(2)(e)1. For wastes with treatment standards expressed as concentrations in the waste extract or in the waste, the certification shall be signed by an authorized representative and shall state the following:

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, 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 achieve the performance levels specified in ss. NR 675.20 to ~~675.24~~ 675.28 and all applicable prohibitions in s. NR 675.13 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

3. For wastes with treatment standards expressed as concentrations in the waste pursuant to s. NR 675.23, if compliance with the treatment standards in ss. NR 675.20 to ~~675.24~~ 675.28 is based in part or in whole on the analytical detection limit alternative specified in s. NR 675.23(3), the certification also shall state the following:

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with ~~chs. NR 600 to 685~~ ch. NR 665 or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and 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 that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

SECTION 160. NR 675.07(2)(e)4. is renumbered NR 675.07(2)(e)6.

SECTION 161. NR 675.07(2)(e)4. and 5. are created to read:

NR 675.07(2)(e)4. For characteristic wastes D001, D002, D003 and D012 to D043 that are subject to the treatment standards in s. NR 675.20 other than those expressed as a required method of treatment, or are reasonably expected to contain underlying hazardous constituents, or are treated on-site to remove the hazardous constituents or are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification shall state the following:

"I certify under penalty of law that the waste has been treated in accordance with the requirements of s. NR 675.20 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

5. Generators or treaters who first claim that, under s. NR 605.05(2)(g), hazardous debris is not subject to the requirements of chs. NR 610 to 685, are subject to the following notification and certification requirements:

a. A one-time notification, including the following information, must be submitted to the department.

b. The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under s. NR 605.05(2)(g), if a different type of debris is treated or if a different technology is used to treat the debris.

c. For debris excluded s. NR 605.04(4), the owner or operator of the treatment facility must document and certify compliance with the treatment standards of s. NR 675.25 Table 1. Records shall be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards. Records shall be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit. For each shipment of treated debris, a certification of compliance with the treatment standards shall be signed by an authorized representative and placed in the facility's files. The certification shall state the following:

"I certify under penalty of law that the debris has been treated in accordance with the requirements of s. NR 675.25. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

SECTION 162. NR 675.07(3)(b) is amended to read:

NR 675.07(3)(b) Test the waste, or an extract of the waste or treatment residue developed using the toxicity characteristic leaching procedure, ~~EPA~~ method 1311 in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c), or using any methods required by generators under s. NR 675.13 to assure that the wastes or treatment residues are in compliance with the applicable treatment standards in ss. NR 675.20 to 675.24 and all applicable prohibitions in s. NR 675.13 or 42 USC 6924(d). Testing shall be performed according to the frequency specified in the facility's waste analysis plan as required by s. NR 630.13.

SECTION 163. NR 675.09(1) and (4)(intro.), (a), and (b) are amended to read:

NR 675.09(1) The generator of a solid waste shall determine each hazardous waste number, or hazardous waste code, applicable to the waste in order to determine the applicable treatment standards under ss. NR 675.20 to ~~675.24~~ 675.24. For purposes of this chapter, the waste will carry the waste code for any applicable listing under s. NR 605.09. In addition, the waste will carry one or more of the waste codes under s. NR 605.08 where the waste exhibits a characteristic, except in the case when the treatment standard for the waste code listed in s. NR 605.09 operates in lieu of the standard for the waste code under s. NR 605.08 as specified

in sub. (4). If the generator determines that the waste displays a hazardous characteristic, and the waste is not a D004-D011 waste, a High TOC D001, or is not treated by CMBST or RORGS of s. NR 675.22 Table 1, the generator shall determine what underlying hazardous constituents are reasonably expected to be present above the universal treatment standards in s. NR 675.28.

(4)(intro.) Wastes that exhibit a characteristic are also subject to s. NR 675.07 requirements, except that once the waste is no longer hazardous, ~~for each shipment of the wastes to a subtitle D facility~~ the ~~initial~~ generator or treatment facility ~~need not send a s. NR 675.07 notification to the facility. In such circumstances, a notification and certification shall be sent to the department.~~ shall place a one-time notification and certification in its files and send the notification and certification to the department, except for those facilities described in sub. (7). The notification and certification that the generator or treatment facility places in its files shall be updated if the process or operation generating the waste changes or if the Subtitle D facility receiving the waste changes. However, the generator or treatment facility need only notify the department on an annual basis if these changes occur. The notification and certification shall be sent to the department no later than December 31 of the year in which the changes occur. The notification shall include:

SECTION 164. NR 675.09(4)(a) is renumbered NR 675.09(4)(a)1. and is amended to read:

NR 675.09(4)(a)1. For characteristic wastes other than those managed on site in a wastewater treatment system subject to ch. 283, Stats., the name and address of the subtitle D facility receiving the waste shipment.

SECTION 165. NR 675.09(4)(a)2. is created to read:

NR 675.09(4)(a)2. For all characteristic wastes, a description of the waste as initially generated, including the applicable hazardous waste number, treatability group, and underlying hazardous constituents.

SECTION 166. NR 675.09(4)(b) is amended to read:

NR 675.09(4)(b) A description of the waste as initially generated, including the applicable hazardous waste number, ~~the applicable wastewater or nonwastewater category and the subdivisions made within a waste code based on waste specific criteria;~~ treatability group or groups, and underlying hazardous constituents in D001 and D002 wastes prohibited under s. NR 675.17, or D012-D043 wastes prohibited under s. NR 675.18.

SECTION 167. NR 675.09(4)(c) is repealed.

SECTION 168. NR 675.09(5) is amended to read:

NR 675.09(5) Notifications sent under sub. (4) shall be signed by an authorized representative and shall state the language found in s. NR 675.07(2)(e)1. If treatment removes the characteristic but does not treat underlying hazardous constituents, then the certification found in s. NR 675.07(2)(e)5. applies.

SECTION 169. NR 675.09(6) and (7) are created to read:

NR 675.09(6) For decharacterized wastes managed on site in a wastewater treatment system subject to ch. 283, Stats., compliance with the treatment standards in s. NR 675.28 shall be monitored quarterly, unless the treatment is aggressive biological treatment, in which case compliance must be monitored annually. Monitoring results shall be kept in on site files for 5 years.

(7) For decharacterized wastes managed on site in a wastewater treatment system subject to ch. 283, Stats., for which all underlying hazardous constituents are addressed by a permit issued under chs. NR 200 to 299, this compliance shall be documented and the documentation shall be kept in on site files.

SECTION 170. NR 675.13(4) is amended to read:

NR 675.13(4) To determine whether or not a waste is a liquid under this section, the following test shall be used: ~~EPA~~ method 9095, paint filter liquids test, as described in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", ~~third edition, September, 1986, as amended by update I in July, 1992~~ as incorporated by reference in s. NR 600.10(2)(b)1. and (c).

~~Note: Publication SW-846 may be obtained from:~~

~~Superintendent of Documents~~
~~U.S. Government Printing Office~~
~~P.O. Box 371954~~
~~Pittsburgh, PA 15250-7954~~
~~(202) 783-3238~~

~~This publication is available for inspection at the offices of the department, the secretary of state and revisor of statutes.~~

SECTION 171. NR 675.17 is created to read:

NR 675.17 WASTE SPECIFIC PROHIBITIONS: NEWLY LISTED WASTES. (1) Effective November 9, 1992, the wastes specified in s. NR 605.09(2)(b) as hazardous waste nos. K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132 and K136; and the wastes specified in s. NR 605.09(3)(c) as Hazardous Waste numbers U328, U353 and U359 are prohibited from land disposal.

(2) Effective June 30, 1993, the wastes specified in s. NR 605.09(2)(a) as hazardous waste nos. F037 and F038 that are not generated from surface impoundment cleanouts or closures are prohibited from land disposal.

(3) Effective June 30, 1994, the wastes specified in s. NR 605.09(2)(a) as hazardous waste nos. F037 and F038 that are generated from surface impoundment cleanouts or closures are prohibited from land disposal.

(4) Effective June 30, 1994, radioactive wastes that are mixed with hazardous wastes specified in s. NR 605.09(2)(a) as hazardous waste nos. F037 and F038; the wastes specified in s. NR 605.09(2)(b) as hazardous waste nos. K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126 K131, K132 and K136; or the wastes specified in s. NR 605.09(3)(c) as hazardous waste nos. U328, U353 and U359 are prohibited from land disposal.

(5) Effective June 30, 1994, debris contaminated with hazardous wastes specified in s. NR 605.09(2)(a) as hazardous waste nos. F037 and F038; the wastes specified in s. NR 605.09(2)(b) as hazardous waste nos. K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126 K131, K132 and K136; or the wastes specified in s. NR 605.09(3)(c) as hazardous waste nos. U328, U353 and U359; and which is not contaminated with any other waste already subject to a prohibition are prohibited from land disposal.

(6) Between June 30, 1992 and June 30, 1993, the wastes included in sub. (2) may be disposed of in a landfill only if the unit is in compliance with s. NR 675.05(1), and may be generated in and disposed of in a surface impoundment only if the unit is in compliance with s. NR 675.05(1).

(7) Between June 30, 1992 and June 30, 1994, the wastes included in subs. (4) and (5) may be disposed of in a landfill only if the unit is in compliance with s. NR 675.05(1), and may be generated in and disposed of in a surface impoundment only if the unit is in compliance with s. NR 675.05(1).

(8) The requirements of subs. (1), (2), (3), (4) and (5) do not apply if:

(a) The wastes meet the applicable standards in ss. NR 675.20 to 675.28.

(b) Persons have been granted an exemption from a prohibition pursuant to a petition under s. NR 675.05(2) with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable alternate standards established pursuant to a petition granted under s. NR 675.24.

(d) Persons have been granted an extension to the effective date of a prohibition pursuant to s. NR 675.05(1), with respect to the wastes covered by the extension.

(9) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in ss. NR 675.21 and 675.23, the generator shall test

a representative 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 levels in ss. NR 675.20 to 675.28, the waste is prohibited from land disposal, and all requirements of ch. NR 675 are applicable, except as otherwise specified.

SECTION 172. NR 675.18 is created to read:

NR 675.18 WASTE SPECIFIC PROHIBITIONS: IGNITABLE AND CORROSIVE CHARACTERISTIC WASTES WHOSE TREATMENT STANDARDS WERE VACATED. Effective August 9, 1993, the wastes specified in subs. (1) and (2) are prohibited from land disposal.

(1) Wastes specified in s. NR 675.21 as D001 but not listed in the High TOC Ignitable Liquids Subcategory that are managed in systems other than those whose discharge is regulated under ch. 283, Stats.

(2) Wastes specified in s. NR 675.22 as D002 that are managed in systems other than those whose discharge is regulated under ch. 283, Stats.

SECTION 173. NR 675.19 is created to read:

NR 675.19 WASTE SPECIFIC PROHIBITIONS: NEWLY IDENTIFIED ORGANIC TOXICITY CHARACTERISTIC WASTES AND NEWLY LISTED COKE BY-PRODUCT AND CHLOROTOLUENE PRODUCTION WASTES; CH. 283 EQUIVALENT; SPENT ALUMINUM POTLINERS; AND CARBAMATE WASTES. (1) 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 s. NR 605.09(2)(b) as Hazardous Waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150 and K151 are prohibited from land disposal. In addition, debris contaminated with 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 s. NR 605.08(5) Table 1 as 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 and D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under ch. 283, Stats., are prohibited from land disposal.

(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 ch. 283, Stats. are prohibited from land disposal. 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 sub. (2) may be disposed in a landfill or surface impoundment only if the unit is in compliance with the requirements specified in s. NR 675.05(1).

(d) The requirements of pars. (a) to (c) do not apply if any of the following conditions apply:

1. The wastes meet the applicable treatment standards in ss. NR 675.20 to 675.28.

2. Persons have been granted an exemption from a prohibition pursuant to a petition under s. NR 675.05(2), 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 s. NR 675.24.

4. Persons have been granted an extension to the effective date of a prohibition pursuant to s. NR 675.05(1), 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 s. NR 675.20, the generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable levels specified in ss. NR 675.20 to 675.28, the waste is prohibited from land disposal, and all requirements of ch. NR 675 are applicable, except as otherwise specified.

(2) SPENT ALUMINUM POTLINERS AND CARBAMATE WASTES. (a) On July 8, 1996, the wastes specified in s. NR 605.08 as Hazardous Waste numbers K156-K161; and in s. NR 605.09 as 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 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 s. NR 605.08 as D003 that are managed in systems other than those whose discharge is regulated under ch. 283, Stats. 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, including D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal, as provided in s. NR 675.20.

(c) On July 8, 1996, the wastes specified in s. NR 605.08 as 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, decharacterized wastes managed in surface impoundments whose discharge is regulated under ch. 283, Stats., are prohibited from land disposal. The following are exceptions to this requirement:

1. Surface impoundments which are licensed under s. NR 680.32.

2. Storm water impoundments.

3. Surface impoundments which are part of facilities in the pulp, paper and paperboard industrial category.

(e) On April 8, 1998, radioactive wastes mixed with K088, K156-K161, 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, and U407, U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(f) Between July 8, 1996 and April 8, 1998, the wastes included in pars. (a), (b), (c) and (e) may be disposed in a landfill or surface impoundment if the landfill or surface impoundment is in compliance with s. NR 675.05(1).

(g) Paragraphs (a) to (e) do not apply if any of the following conditions are met:

1. The wastes meet the applicable treatment standards specified in ss. NR 675.20 to 675.28.

2. A person has been granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

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

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

(h) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in s. NR 675.20, the generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable levels in ss. NR 675.20 to 675.28, the waste is prohibited from land disposal, and all requirements of this chapter are applicable, except as otherwise specified.

SECTION 174. NR 675.20 is repealed and recreated to read:

NR 675.20 APPLICABILITY OF TREATMENT STANDARDS. The table "Treatment Standards for Hazardous Wastes" in this section provides criteria for the land disposal of hazardous wastes. (1) A 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 3 types of treatment standard requirements:

(a) All hazardous constituents in the waste or in the treatment residue shall be at or below the values found in the table for that waste under the heading "wastewaters" or "non-wastewaters", as applicable; or

(b) The hazardous constituents in the extract of the waste or in the extract of the treatment residue shall be at or below the values found in the table under the heading "wastewaters" or "non-wastewaters", as applicable; or

(c) The waste shall be treated using the technologies specified in the table, which are described in detail in s. NR 675.22, Table 1-Technology Codes and Description of Technology-Based Standards.

(2) Compliance with concentration level standards shall be determined as specified in pars. (a) to (d).

(a) For wastewaters, 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.

(b) For all nonwastewaters, based on grab sampling.

(c) For wastes subject to the waste extract standards, other than D004 and D008, by using 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 s. NR 600.10(2)(b)1. and (c).

(d) For wastes D004 and D008, by using either of the following 2 test methods:

1. Method 1311.

2. Method 1310A, the Extraction Procedure Toxicity Test.

(3) Wastes covered by a technology standard may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the department following the procedures in s. NR 675.22(2).

(4) When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue shall meet the lowest treatment standard for the constituent of concern.

(5) Notwithstanding the prohibitions in sub. (1), treatment and disposal facilities may demonstrate, and certify pursuant to s. NR 675.07(2)(e), compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Wastes" in this section, provided that all of the following conditions in pars. (a) to (c) are satisfied:

(a) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of ch. NR 665, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements.

(b) The treatment or disposal facility has used the methods referenced in par. (a) to treat the organic constituents.

(c) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this section by an order of magnitude.

(6) For characteristic wastes D001, D002 and D012-D043 that are subject to treatment standards in the table "Treatment Standards for Hazardous Wastes," all underlying hazardous constituents shall meet Universal Treatment Standards, found in s. NR 675.28, Table UTS, prior to land disposal.

(7) The treatment standards for F001-F005 nonwastewater constituents carbon disulfide, cyclohexanone and methanol apply to wastes which contain only one, 2 or 3 of these constituents. Compliance shall be 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 s. NR 600.10(2)(b)1. and (c). If the waste contains any of these 3 constituents along with any of the other 25 constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone and methanol are not required.

Note: The treatment standards that heretofore appeared in tables in ss. NR 675.21, 675.22 and 675.23 have been consolidated into the table "Treatment Standards for Hazardous Wastes" in this section.

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| D001 | Ignitable Characteristic Wastes, except for the s. NR 605.08(2)(a)1. High TOC Subcategory. | NA | NA | DEACT and meet s. NR 675.28 standards;[8] or RORGS; or CMBST | DEACT and meet s. NR 675.28 standards;[8] or RORGS; or CMBST |
| | High TOC Ignitable Characteristic Liquids Subcategory based on s. NR 605.08(2)(a)1. - Greater than or equal to 10% total organic carbon. (Note: This subcategory consists of nonwastewaters only). | NA | NA | NA | RORGS; or CMBST |
| D002 | Corrosive Characteristic Wastes. | NA | NA | DEACT and meet s. NR 675.28 standards[8] | DEACT and meet s. NR 675.28 standards[8] |
| D002, D004, D005, D006, D007, D008, D009, D010, D011 | Radioactive high level wastes generated during the reprocessing of fuel rods. (Note: This subcategory consists of nonwastewaters only.) | Corrosivity (pH) | NA | NA | HLVIT |
| | | Arsenic | 7440-38-2 | NA | HLVIT |
| | | Barium | 7440-39-3 | NA | HLVIT |
| | | Cadmium | 7440-43-9 | NA | HLVIT |
| | | Chromium (Total) | 7440-47-3 | NA | HLVIT |
| | | Lead | 7439-92-1 | NA | HLVIT |
| | | Mercury | 7439-97-6 | NA | HLVIT |
| | | Selenium | 7782-49-2 | NA | HLVIT |
| | | Silver | 7440-22-4 | NA | HLVIT |
| D003 | Reactive Sulfides Subcategory based on s. NR 605.08(4)(a)5. | NA | NA | DEACT | DEACT |
| | Explosives Subcategory based on s. NR 605.08(4)(a)6., 7., and 8. | NA | NA | DEACT and meet s. NR 675.28 standards[8] | DEACT and meet s. NR 675.28 standards[8] |
| | Unexploded ordnance and other explosive devices which have been the subject of an emergency response. | NA | NA | DEACT | DEACT |
| | Other Reactives Subcategory based on s. NR 605.08(4)(a)1. | NA | NA | DEACT and meet s. NR 675.28 standards[8] | DEACT and meet s. NR 675.28 standards[8] |
| | Water Reactive Subcategory based on s. NR 605.08(4)(a)2., 3., and 4. (Note: This subcategory consists of nonwastewaters only). | NA | NA | NA | DEACT and meet s. NR 675.28 standards[8] |
| | Reactive Cyanides Subcategory based on s. NR 605.08(4)(a)5. | Cyanides (Total)[7] | 57-12-5 | Reserved | 590. |
| | | Cyanides (Amenable).[7] | 57-12-5 | 0.86 | 30. |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| D004 | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the extraction procedure (EP) in SW-846 Method 1310. | Arsenic | 7440-38-2 | 5.0 | 5.0 mg/l EP |
| | | Arsenic; alternate[6] standard for nonwastewaters only. | 7440-38-2 | NA | 5.0 mg/l TCLP |
| D005 | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the extraction procedure (EP) in SW-846 Method 1310. | Barium | 7440-39-3 | 100 | 100 mg/l TCLP |
| D006 | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the extraction procedure (EP) in SW-846 Method 1310. | Cadmium | 7440-43-9 | 1.0 | 1.0 mg/l TCLP |
| | Cadmium Containing Batteries Subcategory (Note: This subcategory consists of nonwastewaters only). | Cadmium | 7440-43-9 | NA | RTHRM |
| D007 | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the extraction procedure (EP) in SW-846 Method 1310. | Chromium (Total) | 7440-47-3 | 5.0 | 5.0 mg/l TCLP |
| D008 | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the extraction procedure (EP) in SW-846 Method 1310. | Lead | 7439-92-1 | 5.0 | 5.0 mg/l EP |
| | | Lead; alternate[6] standard for nonwastewaters only | 7439-92-1 | NA | 5.0 mg/l TCLP |
| | Lead Acid Batteries Subcategory [Note: This standard only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of ch. NR 675 or exempted under other regulations (see s. NR 625.12). This subcategory consists of nonwastewaters only.] | Lead | 7439-92-1 | NA | RLEAD |
| | Radioactive Lead Solids Subcategory (Note: these lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash. This subcategory consists of nonwastewaters only). | Lead | 7439-92-1 | NA | MACRO |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| D009 | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW-846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues. (High Mercury-Organic Subcategory) | Mercury | 7439-97-6 | NA | IMERC; OR RMERC |
| | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW-846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC. (High Mercury-Inorganic Subcategory) | Mercury | 7439-97-6 | NA | RMERC |
| | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW-846 Method 1310; and contain less than 260 mg/kg total mercury. (Low Mercury Subcategory.). | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | All D009 wastewaters. | Mercury | 7439-97-6 | 0.20 | NA |
| | Elemental mercury contaminated with radioactive materials. (Note: This subcategory consists of nonwastewaters only.). | Mercury | 7439-97-6 | NA | AMLGM |
| | Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory. (Note: This subcategory consists of nonwastewaters only.). | Mercury | 7439-97-6 | NA | IMERC |
| D010 | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the extraction procedure (EP) in SW-846 Method 1310. | Selenium | 7782-49-2 | 1.0 | 5.7 mg/l TCLP |
| D011 | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the extraction procedure (EP) in SW-846 Method 1310. | Silver | 7440-22-4 | 5.0 | 5.0 mg/l TCLP |
| D012 | Wastes that are TC for Endrin based on the TCLP in SW-846 Method 1311. | Endrin | 72-20-8 | BIODG; or CMBST | 0.13 and meet s. NR 675.28 standards[8] |
| | | Endrin aldehyde | 7421-93-4 | BIODG; or CMBST | 0.13 and meet s. NR 675.28 standards[8] |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| D013 | Wastes that are TC for Lindane based on the TCLP in SW-846 Method 1311. | alpha-BHC | 319-84-6 | CARBN; or CMBST | 0.066 and meet s. NR 675.28 standards[8] |
| | | beta-BHC | 319-85-7 | CARBN; or CMBST | 0.066 and meet s. NR 675.28 standards[8] |
| | | delta-BHC | 319-86-8 | CARBN; or CMBST | 0.066 and meet s. NR 675.28 standards[8] |
| | | gamma-BHC (Lindane). | 58-89-9 | CARBN; or CMBST | 0.066 and meet s. NR 675.28 standards[8] |
| D014 | Wastes that are TC for Methoxychlor based on the TCLP in SW-846 Method 1311. | Methoxychlor | 72-43-5 | WETOX or CMBST | 0.18 and meet s. NR 675.28 standards[8] |
| D015 | Wastes that are TC for Toxaphene based on the TCLP in SW-846 Method 1311. | Toxaphene | 8001-35-2 | BIODG or CMBST | 2.6 and meet s. NR 675.28 standards[8] |
| D016 | Wastes that are TC for 2,4-D(2,4-Dichlorophenoxyacetic acid) based on the TCLP in SW-846 Method 1311. | 2,4-D(2,4-Dichlorophenoxyacetic acid) | 94-75-7 | CHOXD; BIODG; or CMBST | 10 and meet s. NR 675.28 standards[8] |
| D017 | Wastes that are TC for 2,4,5-TP (Silvex) based on the TCLP in SW-846 Method 1311. | 2,4,5-TP(Silvex) | 93-72-1 | CHOXD or CMBST | 7.9 and meet s. NR 675.28 standards[8] |
| D018 | Wastes that are TC for Benzene based on the TCLP in SW-846 Method 1311. | Benzene | 71-43-2 | 0.14 and meet s. NR 675.28 standards[8]. | 10 and meet s. NR 675.28 standards[8] |
| D019 | Wastes that are TC for Carbon tetrachloride based on the TCLP in SW-846 Method 1311. | Carbon tetrachloride | 56-23-5 | 0.057 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards[8] |
| D020 | Wastes that are TC for Chlordane based on the TCLP in SW-846 Method 1311. | Chlordane (alpha and gamma isomers). | 57-74-9 | 0.0033 and meet s. NR 675.28 standards[8]. | 0.26 and meet s. NR 675.28 standards[8] |
| D021 | Wastes that are TC for Chlorobenzene based on the TCLP in SW-846 Method 1311. | Chlorobenzene | 108-90-7 | 0.057 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| D022 | Wastes that are TC for Chloroform based on the TCLP in SW-846 Method 1311. | Chloroform | 67-66-3 | 0.046 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |
| D023 | Wastes that are TC for o-Cresol based on the TCLP in SW-846 Method 1311. | o-Cresol | 95-48-7 | 0.11 and meet s. NR 675.28 standards[8]. | 5.6 and meet s. NR 675.28 standards.[8] |
| D024 | Wastes that are TC for m-Cresol based on the TCLP in SW-846 Method 1311. | M-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 and meet s. NR 675.28 standards[8]. | 5.6 and meet s. NR 675.28 standards.[8] |
| D025 | Wastes that are TC for p-Cresol based on the TCLP in SW-846 Method 1311. | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 and meet s. NR 675.28 standards[8]. | 5.6 and meet s. NR 675.28 standards.[8] |
| D026 | Wastes that are TC for Cresols (Total) based on the TCLP in SW-846 Method 1311. | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 and meet s. NR 675.28 standards[8]. | 11.2 and meet s. NR 675.28 standards.[8] |
| D027 | Wastes that are TC for p-Dichlorobenzene based on the TCLP in SW-846 Method 1311. | p-Dichlorobenzene (1,4-Dichlorobenzene) | 106-46-7 | 0.090 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |
| D028 | Wastes that are TC for 1,2-Dichloroethane based on the TCLP in SW-846 Method 1311. | 1,2-Dichloroethane | 107-06-2 | 0.21 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |
| D029 | Wastes that are TC for 1,1-Dichloroethylene based on the TCLP in SW-846 Method 1311. | 1,1-Dichlorethylene | 75-35-4 | 0.025 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |
| D030 | Wastes that are TC for 2,4-Dinitrotoluene based on the TCLP in SW-846 Method 1311. | 2,4-Dinitrotoluene | 121-14-2 | 0.32 and meet s. NR 675.28 standards[8]. | 140 and meet s. NR 675.28 standards.[8] |
| D031 | Wastes that are TC for Heptachlor based on the TCLP in SW-846 Method 1311. | Heptachlor | 76-44-8 | 0.0012 and meet s. NR 675.28 standards[8]. | 0.066 and meet s. NR 675.28 standards.[8] |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 and meet s. NR 675.28 standards[8]. | 0.066 and meet s. NR 675.28 standards.[8] |
| D032 | Wastes that are TC for Hexachlorobenzene based on the TCLP in SW-846 Method 1311. | Hexachlorobenzene | 118-74-1 | 0.055 and meet s. NR 675.28 standards[8]. | 10 and meet s. NR 675.28 standards.[8] |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| D033 | Wastes that are TC for Hexachlorobutadiene based on the TCLP in SW-846 Method 1311. | Hexachlorobutadiene | 87-68-3 | 0.055 and meet s. NR 675.28 standards[8]. | 5.6 and meet s. NR 675.28 standards.[8] |
| D034 | Wastes that are TC for Hexachloroethane based on the TCLP in SW-846 Method 1311. | Hexachloroethane | 67-72-1 | 0.055 and meet s. NR 675.28 standards[8]. | 30 and meet s. NR 675.28 standards.[8] |
| D035 | Wastes that are TC for Methyl ethyl ketone based on the TCLP in SW-846 Method 1311. | Methyl ethyl ketone | 78-93-3 | 0.28 and meet s. NR 675.28 standards[8]. | 36 and meet s. NR 675.28 standards.[8] |
| D036 | Wastes that are TC for Nitrobenzene based on the TCLP in SW-846 Method 1311. | Nitrobenzene | 98-95-3 | 0.068 and meet s. NR 675.28 standards[8]. | 14 and meet s. NR 675.28 standards.[8] |
| D037 | Wastes that are TC for Pentachlorophenol based on the TCLP in SW-846 Method 1311. | Pentachlorophenol | 87-86-5 | 0.089 and meet s. NR 675.28 standards[8]. | 7.4 and meet s. NR 675.28 standards.[8] |
| D038 | Wastes that are TC for Pyridine based on the TCLP in SW-846 Method 1311. | Pyridine | 110-86-1 | 0.014 and meet s. NR 675.28 standards[8]. | 16 and meet s. NR 675.28 standards.[8] |
| D039 | Wastes that are TC for Tetrachloroethylene based on the TCLP in SW-846 Method 1311. | Tetrachloroethylene | 127-18-4 | 0.056 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |
| D040 | Wastes that are TC for Trichloroethylene based on the TCLP in SW-846 Method 1311. | Trichloroethylene | 79-01-6 | 0.054 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |
| D041 | Wastes that are TC for 2,4,5-Trichlorophenol based on the TCLP in SW-846 Method 1311. | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 and meet s. NR 675.28 standards[8]. | 7.4 and meet s. NR 675.28 standards.[8] |
| D042 | Wastes that are TC for 2,4,6-Trichlorophenol based on the TCLP in SW-846 Method 1311. | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 and meet s. NR 675.28 standards[8]. | 7.4 and meet s. NR 675.28 standards.[8] |
| D043 | Wastes that are TC for Vinyl chloride based on the TCLP in SW-846 Method 1311. | Vinyl chloride | 75-01-4 | 0.27 and meet s. NR 675.28 standards[8]. | 6.0 and meet s. NR 675.28 standards.[8] |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| F001, F002, F003, F004, & F005 | F001, F002, F003, F004 and/or F005 solvent wastes that contain any combination of one or more of the following spent solvents: acetone, benzene, n-butyl alcohol, carbon disulfide, carbon tetrachloride, chlorinated fluorocarbons, chlorobenzene, o-cresol, m-cresol, p-cresol, cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nitrobenzene, 2-nitropropane, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, trichloroethylene, trichloromonofluoromethane, and/or xylenes [except as specifically noted in other subcategories]. See further details of these listings in s. NR 605.09(2)(a). | Acetone | 67-64-1 | 0.28 | 160 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Ethyl ether | 60-29-7 | 0.12 | 160 |
| | | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | 1,1,1-Trichlorethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | F003 and/or F005 solvent wastes that contain any combination of one or more of the following three solvents as the only listed F001-5 solvents: carbon disulfide, cyclohexanone, and/or methanol [formerly s. NR 675.21(3)]. | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/l TCLP |
| | | Cyclohexanone | 108-94-1 | 0.36 | 0.75 mg/l TCLP |
| | | Methanol | 67-56-1 | 5.6 | 0.75 mg/l TCLP |
| | F005 solvent waste containing 2-Nitropropane as the only listed F001-5 solvent. | 2-Nitropropane | 79-46-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | F005 solvent waste containing 2-Ethoxyethanol as the only listed F001-5 solvent. | 2-Ethoxyethanol | 110-80-5 | BIODG; or CMBST | CMBST |
| F006 | Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. | Cadmium | 7440-43-9 | 0.69 | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amendable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 mg/l TCLP |
| F007 | Spent cyanide plating bath solutions from electroplating operations. | Cadmium | 7440-43-9 | NA | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 mg/l TCLP |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 mg/l TCLP |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 mg/l TCLP |
| F010 | Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process. | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | NA |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. | Cadmium | 7440-43-9 | NA | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 mg/l TCLP |
| F012 | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 mg/l TCLP |
| F019 | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| F020, F021, F022, F023, F026 | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of intermediates used to produce its derivatives (i.e., F021); (3) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F022); and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenols, excluding wastes from equipment used only for the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F023); (2) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F026). | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| F024 | Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in s. NR 605.09(2). | All F024 wastes | NA | CMBST | CMBST |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | 0.28 |
| | | 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| F025 | Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.<br>F025 - Light Ends Subcategory | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | Spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. F025 - Spent Filters/Aids and Desiccants Subcategory | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| F027 | Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component. | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| F028 | Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Wastes Nos. F020, F021, F023, F026, and F027. | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| F037 | Petroleum refinery primary oil/water/solids separation sludge - Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in s. NR 605.14(1) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. | Acenaphthene | 83-32-9 | 0.059 | NA |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 mg/l TCLP |
| F038 | Petroleum refinery secondary (emulsified) oil/water/solids separation sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air floatation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in s. NR 605.14(1) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological units) and F037, K048, and K051 are not included in this listing. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations). | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 mg/l TCLP |
| F039 | Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under s. NR 605.09. Leachate resulting from the disposal of one or more of the following listed Hazardous Wastes and no other Hazardous Wastes retains its listed Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028. | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetonitrile | 75-05-8 | 5.6 | NA |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| | | Acrolein | 107-02-8 | 0.29 | NA |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Aldrin | 309-00-2 | 0.021 | 0.066 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Aramite | 140-57-8 | 0.36 | NA |
| | | alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| | | beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| | | delta-BHC | 319-86-8 | 0.023 | 0.066 |
| | | gamma-BHC | 58-89-9 | 0.0017 | 0.066 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Bromodichloromethane | 75-27-4 | 0.35 | 15 |
| | | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Butyl benzyl phthalate | 85-68-7 | 0.017 | 28 |
| | | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chlorobenzilate | 510-15-6 | 0.10 | NA |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | NA |
| | | Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| | | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| | | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| | | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| | | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| | | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| | | Dibromomethane | 74-95-3 | 0.11 | 15 |
| | | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| | | p,p'-DDE | 72-55-9 | 0.031 | 0.087 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| | | p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Dibenz(a,e)pyrene | 192-65-4 | 0.061 | NA |
| | | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| | | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| | | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| | | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| | | Dieldrin | 60-57-1 | 0.017 | 0.13 |
| | | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| | | 2-4-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| | | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| | | 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| | | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| | | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | 1,4-Dioxane | 123-91-1 | 12.0 | 170 |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | NA |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | NA |
| | | 1,2-Diphenylhydrazine | 122-66-7 | 0.087 | NA |
| | | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| | | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| | | Endrin | 72-20-8 | 0.0028 | 0.13 |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Ethyl ether | 60-29-7 | 0.12 | 160 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| | | Ethylene oxide | 75-21-8 | 0.12 | NA |
| | | Famphur | 52-85-7 | 0.017 | 15 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| | | Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Iodomethane | 74-88-4 | 0.19 | 65 |
| | | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| | | Isodrin | 65-73-6 | 0.021 | 0.066 |
| | | Isosafrole | 120-58-1 | 0.081 | 2.6 |
| | | Kepone | 143-50-8 | 0.0011 | 0.13 |
| | | Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| | | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| | | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| | | 4,4-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| | | Methyl methansulfonate | 66-27-3 | 0.018 | NA |
| | | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| | | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| | | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| | | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| | | N-Nitrosodimethylamine | 62-75-9 | 0.40 | NA |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |
| | | N-Nitrosomethylethylamine | 10595-95-6 | 0.40 | 2.3 |
| | | N-Nitrosomorpholine | 59-89-2 | 0.40 | 2.3 |
| | | N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| | | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| | | Parathion | 56-38-2 | 0.014 | 4.6 |
| | | Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenacetin | 62-44-2 | 0.081 | 16 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Phorate | 298-02-2 | 0.021 | 4.6 |
| | | Phthalic anhydride | 85-44-9 | 0.055 | NA |
| | | Pronamide | 23950-58-5 | 0.093 | 1.5 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Safrole | 94-59-7 | 0.081 | 22 |
| | | Silvex (2,4,5-TP) | 93-72-1 | 0.72 | 7.9 |
| | | 2,4,5-T | 93-76-5 | 0.72 | 7.9 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| | | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| | | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| | | tris(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | NA |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Antimony | 7440-36-0 | 1.9 | 2.1 mg/l TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Barium | 7440-39-3 | 1.2 | 7.6 mg/l TCLP |
| | | Beryllium | 7440-41-7 | 0.82 | NA |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Cadmium | 7440-43-9 | 0.69 | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) | 57-12-5 | 0.86 | NA |
| | | Fluoride | 16964-48-8 | 35 | NA |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |
| | | Silver | 7440-22-4 | 0.43 | 0.30 mg/l TCLP |
| | | Sulfide | 8496-25-8 | 14 | NA |
| | | Thallium | 7440-28-0 | 1.4 | NA |
| | | Vanadium | 7440-62-2 | 4.3 | NA |
| K001 | Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous). | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated). | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K008 | Oven residue from the production of chrome oxide green pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K009 | Distillation bottoms from the production of acetaldehyde from ethylene. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| K010 | Distillation side cuts from the production of acetaldehyde from ethylene. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| K011 | Bottom stream from the wastewater stripper in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K013 | Bottom stream from the acetonitrile column in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K014 | Bottoms from the acetonitrile purification column in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K015 | Still bottoms from the distillation of benzyl chloride. | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzal chloride | 98-87-3 | 0.055 | 6.0 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluroanthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| K016 | Heavy ends or distillation residues from the production of carbon tetrachloride. | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K017 | Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| K018 | Heavy ends from the fractionation column in ethyl chloride production. | Chloroethane | 75-00-3 | 0.27 | 6.0 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Chloromethane | 74-87-3 | 0.19 | NA |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K019 | Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.. | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | NA |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | NA |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K020 | Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K021 | Aqueous spent antimony catalyst waste from fluoromethanes production. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Antimony | 7440-36-0 | 1.9 | 2.1 mg/l TCLP |
| K022 | Distillation bottom tars from the production of phenol/acetone from cumene. | Toluene | 108-88-3 | 0.080 | 10 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| K023 | Distillation light ends from the production of phthalic anhydride from naphthalene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K024 | Distillation bottoms from the production of phthalic anhydride from naphthalene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K025 | Distillation bottoms from the production of nitrobenzene by the nitration of benzene. | NA | NA | LLEXT fb SSTRP fb CARBN; or CMBST | CMBST |
| K026 | Stripping still tails from the production of methyl ethyl pyridines. | NA | NA | CMBST | CMBST |
| K027 | Centrifuge and distillation residues from toluene diisocyanate production. | NA | NA | CARBN; or CMBST | CMBST |
| K028 | Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| K029 | Waste from the product steam stripper in the production of 1,1,1-trichloroethane. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| K030 | Column bodies or heavy ends from the combined production of trichloroethylene and perchloroethylene. | o-Dichlorobenzene | 95-50-1 | 0.088 | NA |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | NA |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Hexachloropropylene | 1888-71-7 | NA | 30 |
| | | Pentachlorobenzene | 608-93-5 | NA | 10 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K031 | By-product salts generated in the production of MSMA and cacodylic acid. | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| K032 | Wastewater treatment sludge from the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| K033 | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K034 | Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. | Hexachlorocylopentadiene | 77-47-4 | 0.057 | 2.4 |
| K035 | Wastewater treatment sludges generated in the production of creosote. | Acenaphthene | 83-32-9 | NA | 3.4 |
| | | Anthracene | 120-12-7 | NA | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Dibenz(a,h)anthracene | 53-70-3 | NA | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Fluorene | 86-73-7 | NA | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | NA | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| K036 | Still bottoms from toluene reclamation distillation in the production of disulfoton. | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| K037 | Wastewater treatment sludges from the production of disulfoton. | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| K038 | Wastewater from the washing and stripping of phorate production. | Phorate | 298-02-2 | 0.021 | 4.6 |
| K039 | Filter cake from the filtration of diethylphosphorodithioc acid in the production of phorate. | NA | NA | CARBN; or CMBST | CMBST |
| K040 | Wastewater treatment sludge from the production of phorate. | Phorate | 298-02-2 | 0.021 | 4.6 |
| K041 | Wastewater treatment sludge from the production of toxaphene. | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| K042 | Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T. | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K043 | 2,6-Dichlorophenol waste from the production of 2,4-D. | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| | | 2,6-Dichlorophenol | 187-65-0 | 0.044 | 14 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| K044 | Wastewater treatment sludges from the manufacturing and processing of explosives. | NA | NA | DEACT | DEACT |
| K045 | Spent carbon from the treatment of wastewater containing explosives. | NA | NA | DEACT | DEACT |
| K046 | Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds. | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K047 | Pink/red water from TNT operations. | NA | NA | DEACT | DEACT |
| K048 | Dissolved air flotation (DAF) float from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-33 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 mg/l TCLP |
| K049 | Slop oil emulsion solids from the petroleum refining industry. | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Chrysene | 2218-01-9 | 0.059 | 3.4 |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-. and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 mg/l TCLP |
| K050 | Heat exchanger bundle cleaning sludge from the petroleum refining industry. | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 mg/l TCLP |
| K051 | API separator sludge from the petroleum refining industry. | Acenaphthene | 83-32-9 | 0.059 | NA |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 2218-01-9 | 0.059 | 3.4 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Di-n-butyl phthalate | 105-67-9 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 mg/l TCLP |
| K052 | Tank bottoms (leaded) from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 mg/l TCLP |
| K060 | Ammonia still lime sludge from coking operations. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces. | Antimony | 7440-36-0 | NA | 2.1 mg/l TCLP |
| | | Arsenic | 7440-38-2 | NA | 5.0 mg/l TCLP |
| | | Barium | 7440-39-3 | NA | 7.6 mg/l TCLP |
| | | Beryllium | 7440-41-7 | NA | 0.014 mg/l TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Selenium | 7782-49-2 | NA | 0.16 mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 mg/l TCLP |
| | | Thallium | 7440-28-0 | NA | 0.078 mg/l TCLP |
| | | Zinc | 7440-66-6 | NA | 5.3 mg/l TCLP |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| K062 | Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332). | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| K069 | Emission control dust/sludge from secondary lead smelting. - Calcium Sulfate (Low Lead) Subcategory | Cadmium | 7440-43-9 | 0.69 | 0.19 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | Emission control dust/sludge from secondary lead smelting. - Non-Calcium Sulfate (High Lead) Subcategory | NA | NA | NA | RLEAD |
| K071 | K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used) nonwastewaters that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.02 mg/l TCLP |
| | K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used) nonwastewaters that are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All K071 wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| K073 | Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K083 | Distillation bottoms from aniline production. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| K084 | Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| K085 | Distillation or fractionation column bottoms from the production of chlorobenzenes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K086 | Solvent wastes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Butylbenzyl phthalate | 85-68-7 | 0.017 | 28 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| | | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K087 | Decanter tank tar sludge from coking operations. | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K088 | Spent potliners from primary aluminum reduction. | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene | 207-08-9 | 0.11 | 6.8 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Indeno(1,2,3-c,d)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Antimony | 7440-36-0 | 1.9 | 2.1 mg/l TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Barium | 7440-39-3 | 1.2 | 7.6 mg/l TCLP |
| | | Beryllium | 7440-41-7 | 0.82 | 0.014 mg/l TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |
| | | Silver | 7440-22-4 | 0.43 | 0.30 mg/l TCLP |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| | | Cyanide (Amenable) | 57-12-5 | 0.86 | 30 |
| | | Fluoride | 16984-48-8 | 35 | 48 mg/l TCLP |
| K093 | Distillation light ends from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K094 | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K095 | Distillation bottoms from the production of 1,1,1-trichloroethane. | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K096 | Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K097 | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K098 | Untreated process wastewater from the production of toxaphene. | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| K099 | Untreated wastewater from the production of 2,4-D. | 2,4-Dichlorophenoxyacetic acid | 94-75-7 | 0.72 | 10 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. | Cadmium | 7440-43-9 | 0.69 | 0.19 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| K101 | Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | o-Nitroaniline | 88-74-4 | 0.27 | 14 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K102 | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K103 | Process residues from aniline extraction from the production of aniline. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K104 | Combined wastewater streams generated from nitrobenzene/aniline production. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K105 | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| K106 | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260 mg/kg total mercury that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All K106 wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| K107 | Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| K108 | Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K109 | Spent filter cartridges from product purification from the production of 1,1-dimethyhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K110 | Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K111 | Product washwaters from the production of dinitrotoluene via nitration of toluene | 2,4-Dinitrotoluene | 121-1-1 | 0.32 | 140 |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| K112 | Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K113 | Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; or CMBST | CMBST |
| K114 | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; or CMBST | CMBST |
| K115 | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | NA | NA | CARBN; or CMBST | CMBST |
| K116 | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. | NA | NA | CARBN; or CMBST | CMBST |
| K117 | Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| K118 | Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K123 | Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K124 | Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K125 | Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K126 | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K131 | Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K132 | Spent absorbent and wastewater separator solids from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K136 | Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K140 | Waste solids and filter cartridges from the production of 2,4,6-tribromophenol. | 2,4,6-Tribromophenol | 118-79-6 | 0.035 | 7.4 |
| K141 | Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations). | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-2-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K142 | Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K143 | Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| K144 | Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| K145 | Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| K147 | Tar storage tank residues from coal tar refining. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K148 | Residues from coal tar distillation, including, but not limited to, still bottoms. | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K149 | Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. This waste does not include still bottoms from the distillations of benzyl chloride. | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K150 | Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K151 | Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | Toluene | 108-88-3 | 0.080 | 10 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| K156 | Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes.[9] | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbaryl | 63-25-21 | 0.006 | 0.14 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Methomyl | 16752-77-5 | 0.028 | 0.14 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Triethylamine | 121-44-8 | 0.081 | 1.5 |
| K157 | Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes.[9] | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | Methomyl | 16752-77-5 | 0.028 | 0.14 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | o-Phenylenediamine | 95-54-5 | 0.056 | 5.6 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Triethylamine | 121-44-8 | 0.081 | 1.5 |
| K158 | Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes.[9] | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K159 | Organics from the treatment of thiocarbamate wastes.[9] | Benzene | 71-43-2 | 0.14 | 10 |
| | | Butylate | 2008-41-5 | 0.042 | 1.5 |
| | | EPTC (Eptam) | 759-94-4 | 0.042 | 1.4 |
| | | Molinate | 2212-67-1 | 0.042 | 1.4 |
| | | Pebulate | 1114-71-2 | 0.042 | 1.4 |
| | | Vernolate | 1929-77-7 | 0.042 | 1.4 |
| K161 | Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts.[9] | Antimony | 7440-36-0 | 1.9 | 2.1 mg/l TCLP |
| | | Arsenic | 7440-38-2 | 1.9 | 5.0 mg/l TCLP |
| | | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/l TCLP |
| | | Dithiocarbamates (total) | NA | 0.028 | 28 |
| | | Lead | 7439-92-1 | 0.069 | 0.37 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |
| P001 | Warfarin, & salts, when present at concentrations greater than 0.3%. | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| P002 | 1-Acetyl-2-thiourea | 1-Acetyl-2-thiourea | 591-08-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P003 | Acrolein | Acrolein | 107-02-8 | 0.29 | CMBST |
| P004 | Aldrin | Aldrin | 309-00-2 | 0.021 | 0.066 |
| P005 | Allyl alcohol | Allyl alcohol | 107-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P006 | Aluminum phosphide | Aluminum phosphide | 20859-73-8 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P007 | 5-Aminomethyl 3-isoxazolol | 5-Aminomethyl 3-isoxazolol | 2763-96-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P008 | 4-Aminopyridine | 4-Aminopyridine | 504-24-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P009 | Ammonium picrate | Ammonium picrate | 131-74-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P010 | Arsenic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P011 | Arsenic pentoxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P012 | Arsenic trioxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P013 | Barium cyanide | Barium | 7440-39-3 | NA | 7.6 mg/l TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P014 | Thiophenol (Benzene thiol) | Thiophenol (Benzene thiol) | 108-98-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P015 | Beryllium dust | Beryllium | 7440-41-7 | RMETL; or RTHRM | RMETL; or RTHRM |
| P016 | Dichloromethyl ether (Bis(chloromethyl)ether) | Dichloromethyl ether | 542-88-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| P017 | Bromoacetone | Bromoacetone | 598-31-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P018 | Brucine | Brucine | 357-57-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P020 | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| P021 | Calcium cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P022 | Carbon disulfide | Carbon disulfide | 75-15-0 | 3.8 | CMBST |
| | | Carbon disulfide; alternate[6] standard for nonwastewaters only. | 75-15-0 | NA | 4.8 mg/l TCLP |
| P023 | Chloroacetaldehyde | Chloroacetaldehyde | 107-20-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P024 | p-Chloroaniline | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| P026 | 1-(o-Cholorphenyl)thiourea | 1-(o-Cholorphenyl)thiourea | 5344-82-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P027 | 3-Chloropropionitrile | 3-Chloropropionitrile | 542-76-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P028 | Benzyl chloride | Benzyl chloride | 100-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P029 | Copper cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P030 | Cyanides (soluble salts and complexes) | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P031 | Cyanogen | Cyanogen | 460-19-5 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| P033 | Cyanogen chloride | Cyanogen chloride | 506-77-4 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| P034 | 2-Cyclohexly-4,6-dinitrophenol | 2-Cyclohexly-4,6-dinitrophenol | 131-89-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P036 | Dichlorophenylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P037 | Dieldrin | Dieldrin | 60-57-1 | 0.017 | 0.13 |
| P038 | Diethylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P039 | Disulfoton | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| P040 | 0,0-Diethyl O-pyrazinyl phosphorothioate | 0,0-Diethyl O-pyrazinyl phosphorothioate | 297-97-2 | CARBN; or CMBST | CMBST |
| P041 | Diethyl-p-nitrophenyl phosphate | Diethyl-p-nitrophenyl phosphate | 311-45-5 | CARBN; or CMBST | CMBST |
| P042 | Epinephrine | Epinephrine | 51-43-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P043 | Diisopropylfluorophosphate (DFP) | Diisopropylfluorophosphate (DFP) | 55-91-4 | CARBN; or CMBST | CMBST |
| P044 | Dimethoate | Dimethoate | 60-51-5 | CARBN; or CMBST | CMBST |
| P045 | Thiofanox | Thiofanox | 39196-18-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P046 | alpha, alpha-Dimethylphenethylamine | alpha, alpha-Dimethylphenethylamine | 122-09-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P047 | 4,6-Dinitro-o-cresol | 4,6-Dinitro-o-cresol | 543-52-1 | 0.28 | 160 |
| | 4,6-Dinitro-o-cresol salts | NA | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P048 | 2,4-Dinitrophenol | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| P049 | Dithiobiuret | Dithiobiuret | 541-53-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P050 | Endosulfan | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| P051 | Endrin | Endrin | 72-20-8 | 0.0028 | 0.13 |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| P054 | Aziridine | Aziridine | 151-56-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P056 | Fluorine | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | ADGAS fb NEUTR |
| P057 | Fluoroacetamide | Fluoroacetamide | 640-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P058 | Fluoroacetic acid, sodium salt | Fluoroacetic acid, sodium salt | 62-74-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P059 | Heptachlor | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| P060 | Isodrin | Isodrin | 465-73-6 | 0.021 | 0.066 |
| P062 | Hexaethyl tetraphosphate | Hexaethyl tetraphosphate | 757-58-4 | CARBN; or CMBST | CMBST |
| P063 | Hydrogen cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P064 | Isocyanic acid, ethyl ester | Isocyanic acid, ethyl ester | 624-83-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P065 | Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC |
| | Mercury fulminate nonwastewaters that are either incinerator residues or are residues from RMERC; and contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7339-97-6 | NA | RMERC |
| | Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | All mercury fulminate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| P066 | Methomyl | Methomyl | 16752-77-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P067 | 2-Methyl-aziridine | 2-Methyl-aziridine | 75-55-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P068 | Methyl hydrazine | Methyl hydrazine | 60-34-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED, or CMBST |
| P069 | 2-Methyllactonitrile | 2-Methyllactonitrile | 75-86-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P070 | Aldicarb | Aldicarb | 116-06-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P071 | Methyl parathion | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| P072 | 1-Naphthyl-2-thiourea | 1-Naphthyl-2-thiourea | 86-88-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P073 | Nickel carbonyl | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| P074 | Nickel-cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable[7] | 57-12-5 | 0.86 | 30 |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| P075 | Nicotine and salts | Nicotine and salts | 54-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P076 | Nitric oxide | Nitric oxide | 10102-43-9 | ADGAS | ADGAS |
| P077 | p-Nitroaniline | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| P078 | Nitrogen dioxide | Nitrogen dioxide | 10102-44-0 | ADGAS | ADGAS |
| P081 | Nitroglycerin | Nitroglycerin | 55-63-0 | CHOXD; CHRED; CARBN; BIODG or CMBST | CHOXD; CHRED; or CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| P082 | N-Nitrosodimethylamine | N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| P084 | N-Nitrosomethylvinylamine | N-Nitrosomethylvinylamine | 4549-40-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P085 | Octamethylpyrophosphoramide | Octamethylpyrophosphoramide | 152-16-9 | CARBN; or CMBST | CMBST |
| P087 | Osmium tetroxide | Osmium tetroxide | 20816-12-0 | RMETL; or RTHRM | RMETL; or RTHRM |
| P088 | Endothall | Endothall | 145-73-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P089 | Parathion | Parathion | 56-38-2 | 0.014 | 4.6 |
| P092 | Phenyl mercuric acetate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC; or RMERC |
| | Phenyl mercuric acetate nonwastewaters that are either incinerator residues or are residues from RMERC; and still contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less then 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All phenyl mercuric acetate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| P093 | Phenylthiourea | Phenylthiourea | 103-85-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P094 | Phorate | Phorate | 298-02-2 | 0.021 | 4.6 |
| P095 | Phosgene | Phosgene | 75-44-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P096 | Phosphine | Phosphine | 7803-51-2 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P097 | Famphur | Famphur | 52-85-7 | 0.017 | 15 |
| P098 | Potassium cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P099 | Potassium silver cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.30 mg/l TCLP |
| P101 | Ethyl cyanide (Propanenitrile) | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |
| P102 | Propargyl alcohol | Propargyl alcohol | 107-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P103 | Selenourea | Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |
| P104 | Silver cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.30 mg/l TCLP |
| P105 | Sodium azide | Sodium azide | 26628-22-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P106 | Sodium cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P108 | Strychnine and salts | Strychnine and salts | 57-24-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P109 | Tetraethyldithiopyrophosphate | Tetraethyldithiopyrophosphate | 3689-24-5 | CARBN; or CMBST | CMBST |
| P110 | Tetraethyl lead | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| P111 | Tetraethylpyrophosphate | Tetraethylpyrophosphate | 107-49-3 | CARBN; or CMBST | CMBST |
| P112 | Tetranitromethane | Tetranitromethane | 509-14-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P113 | Thallic oxide | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| P114 | Thallium selenite | Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |
| P115 | Thallium (I) sulfate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| P116 | Thiosemicarbazide | Thiosemicarbazide | 79-19-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P118 | Trichloromethanethiol | Trichloromethanethiol | 75-70-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P119 | Ammonium vanadate | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P120 | Vanadium pentoxide | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P121 | Zinc cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P122 | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10% | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P123 | Toxaphene | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| P127 | Carbofuran [9] | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| P128 | Mexacarbate [9] | Mexacarbate | 315-18-4 | 0.056 | 1.4 |
| P185 | Tirpate [9] | Tirpate | 26419-73-8 | 0.056 | 0.28 |
| P188 | Physostigimine salicylate [9] | Physostigmine salicylate | 57-64-7 | 0.056 | 1.4 |
| P189 | Carbosulfan [9] | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| P190 | Metolcarb [9] | Metolcarb | 1129-41-5 | 0.056 | 1.4 |
| P191 | Dimetilan [9] | Dimetilan | 644-64-4 | 0.056 | 1.4 |
| P192 | Isolan [9] | Isolan | 119-38-0 | 0.056 | 1.4 |
| P194 | Oxamyl [9] | Oxamyl | 23135-22-0 | 0.056 | 0.28 |
| P196 | Manganese dimethyldithiocarbamate [9] | Dithiocarbamates (total) | NA | 0.028 | 28 |
| P197 | Formparanate | Formparanate | 17702-57-7 | 0.056 | 1.4 |
| P198 | Formetanate hydrochloride [9] | Formetanate hydrochloride | 23422-53-9 | 0.056 | 1.4 |
| P199 | Methiocarb [9] | Methiocarb | 2032-65-7 | 0.056 | 1.4 |
| P201 | Promecarb [9] | Promecarb | 2631-37-0 | 0.056 | 1.4 |
| P202 | M-Cumenyl methylcarbamate [9] | m-Cumenyl methylcarbamate | 64-00-6 | 0.056 | 1.4 |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| P203 | Aldicarb sulfone [9] | Aldicarb sulfone | 1646-88-4 | 0.056 | 0.28 |
| P204 | Physostigmine [9] | Physostigmine | 57-47-6 | 0.056 | 1.4 |
| P205 | Ziram [9] | Dithiocarbamates (total) | NA | 0.028 | 28 |
| U001 | Acetaldehyde | Acetaldehyde | 75-07-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U002 | Acetone | Acetone | 67-64-1 | 0.28 | 160 |
| U003 | Acetonitrile | Acetonitrile | 75-05-8 | 5.6 | CMBST |
| | | Acetonitrile; alternate[6] standard for nonwastewaters only | 75-05-8 | NA | 38 |
| U004 | Acetophenone | Acetophenone | 98-86-2 | 0.010 | 9.7 |
| U005 | 2-Acetylaminofluorene | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| U006 | Acetyl chloride | Acetyl Chloride | 75-36-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U007 | Acrylamide | Acrylamide | 79-06-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U008 | Acrylic acid | Acrylic acid | 79-10-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U009 | Acrylonitrile | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| U010 | Mitomycin C | Mitomycin C | 50-07-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U011 | Amitrole | Amitrole | 61-82-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U012 | Aniline | Aniline | 62-53-3 | 0.81 | 14 |
| U014 | Auramine | Auramine | 492-80-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U015 | Azaserine | Azaserine | 115-02-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U016 | Benz(c)acridine | Benz(c)acridine | 225-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U017 | Benzal chloride | Benzal chloride | 98-87-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U018 | Benz(a)anthracene | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| U019 | Benzene | Benzene | 71-43-2 | 0.14 | 10 |
| U020 | Benzenesulfonyl chloride | Benzenesulfonyl chloride | 98-09-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U021 | Benzidine | Benzidine | 92-87-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U022 | Benzo(a)pyrene | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| U023 | Benzotrichloride | Benzotrichloride | 98-07-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U024 | bis(2-Chloroethoxy)methane | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| U025 | bis(2-Chloroethyl)ether | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| U026 | Chlornaphazine | Chlornaphazine | 494-03-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U027 | bis(2-Chloroisopropyl)ether | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| U028 | bis(2-Ethylhexyl)phthalate | bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.28 | 28 |
| U029 | Methyl bromide (Bromomethane) | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| U030 | 4-Bromophenyl phenyl ether | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| U031 | n-Butyl alcohol | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U032 | Calcium chromate | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| U033 | Carbon oxyfluoride | Carbon oxyfluoride | 353-50-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U034 | Trichloroacetaldehyde (Chloral) | Trichloroacetaldehyde (Chloral) | 75-87-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U035 | Chlorambucil | Chlorambucil | 305-03-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U036 | Chlordane | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| U037 | Chlorobenzene | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| U038 | Chlorobenzilate | Chlorobenzilate | 510-15-6 | 0.10 | CMBST |
| U039 | p-Chloro-m-cresol | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| U041 | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | 106-89-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U042 | 2-Chloroethyl vinyl ether | 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | CMBST |
| U043 | Vinyl chloride | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| U044 | Chloroform | Chloroform | 67-66-3 | 0.046 | 6.0 |
| U045 | Chloromethane (Methyl chloride) | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| U046 | Chloromethyl methyl ether | Chloromethyl methyl ether | 107-30-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U047 | 2-Chloronaphthalene | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| U048 | 2-Chlorophenol | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| U049 | 4-Chloro-o-toluidine hydrochloride | 4-Chloro-o-toluidine hydrochloride | 3165-93-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U050 | Chrysene | Chrysene | 218-01-9 | 0.059 | 3.4 |
| U051 | Creosote | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| U052 | Cresols (Cresylic acid) | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 |
| U053 | Crotonaldehyde | Crotonaldehyde | 4170-30-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U055 | Cumene | Cumene | 98-82-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U056 | Cyclohexane | Cyclohexane | 110-82-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U057 | Cyclohexanone | Cyclohexanone | 108-94-1 | 0.36 | CMBST |
| | | Cyclohexanone; alternate[6] standard for nonwastewaters only | 108-94-1 | NA | 0.75 mg/l TCLP |
| U058 | Cyclophosphamide | Cyclophosphamide | 50-18-0 | CARBN; or CMBST | CMBST |
| U059 | Daunomycin | Daunomycin | 20830-81-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U060 | DDD | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U061 | DDT | o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| | | p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| | | p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| U062 | Diallate | Diallate | 2303-16-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U063 | Dibenz(a,h)anthracene | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| U064 | Dibenz(a,i)pyrene | Dibenz(a,i)pyrene | 189-55-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U066 | 1,2-Dibromo-3-chloropropane | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| U067 | Ethylene dibromide (1,2-Dibromoethane) | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| U068 | Dibromomethane | Dibromomethane | 74-95-3 | 0.11 | 15 |
| U069 | Di-n-butyl phthalate | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| U070 | o-Dichlorobenzene | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| U071 | m-Dichlorobenzene | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| U072 | p-Dichlorobenzene | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| U073 | 3,3'-Dichlorobenzidine | 3,3'-Dichlorobenzidine | 91-94-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U074 | 1,4-Dichloro-2-butene | cis-1,4-Dichloro-2-butene | 1476-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | trans-1,4-Dichloro-2-butene | 764-41-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U075 | Dichlorodifluoromethane | Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| U076 | 1,1-Dichloroethane | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| U077 | 1,2-Dichloroethane | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U078 | 1,1-Dichloroethylene | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| U079 | 1,2-Dichloroethylene | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| U080 | Methylene chloride | Methylene chloride | 75-09-2 | 0.089 | 30 |
| U081 | 2,4-Dichlorophenol | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| U082 | 2,6-Dichlorophenol | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| U083 | 1,2-Dichloropropane | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| U084 | 1,3-Dichloroproplyene | cis-1,3-Dichloroproplyene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloroproplyene | 10061-02-6 | 0.036 | 18 |
| U085 | 1,2:3,4-Diepoxybutane | 1,2:3,4-Diepoxybutane | 1464-53-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U086 | N,N'-Diethylhydrazine | N,N'-Diethylhydrazine | 1615-80-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U087 | O,O-Diethyl S-methyldithiophosphate | O,O-Diethyl S-methyldithiophosphate | 3288-58-2 | CARBN; CMBST | CMBST |
| U088 | Diethyl phthalate | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| U089 | Diethyl stilbestrol | Diethyl stilbestrol | 56-53-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U090 | Dihydrosafrole | Dihydrosafrole | 94-58-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U091 | 3,3'-Dimethoxybenzidine | 3,3'-Dimethoxybenzidine | 119-90-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U092 | Dimethylamine | Dimethylamine | 124-40-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U093 | p-Dimethylaminoazobenzene | p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | CMBST |
| U094 | 7,12-Dimethylibenz(a)anthracene | 7,12-Dimethylbenz(a)anthracene | 57-97-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U095 | 3,3'-Dimethylbenzidine | 3,3'-Dimethylbenzidine | 119-93-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U096 | alpha, alpha-Dimethyl benzyl hydroperoxide | alpha, alpha-Dimethyl benzyl hydroperoxide | 80-15-9 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U097 | Dimethylcarbamoyl chloride | Dimethylcarbamoyl chloride | 79-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U098 | 1,1-Dimethylhydrazine | 1,1-Dimethylhydrazine | 57-14-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U099 | 1,2-Dimethylhydrazine | 1,2-Dimethylhydrazine | 540-73-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST CHOXD; CHRED; or CMBST |
| U101 | 2,4-Dimethylphenol | 2,4-Dimethylphenol | 105-67-9 | 0.036 | 14 |
| U102 | Dimethyl phthalate | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| U103 | Dimethyl sulfate | Dimethyl sulfate | 77-78-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U105 | 2,4-Dinitrotoluene | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| U106 | 2,6-Dinitrotoluene | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| U107 | Di-n-octyl phthalate | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| U108 | 1,4-Dioxane | 1,4-Dioxane | 123-91-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | 1,4-Dioxane; alternate[6] standard for nonwastewaters only | 123-91-1 | NA | 170 |
| U109 | 1,2-Diphenylhydrazine | 1,2-Diphenylhydrazine | 122-66-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| | | 1,2-Diphenylhydrazine; alternate[6] standard for wastewaters only | 122-66-7 | 0.087 | NA |
| U110 | Dipropylamine | Dipropylamine | 142-84-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U111 | Di-n-propylnitrosamine | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| U112 | Ethyl acetate | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| U113 | Ethyl acrylate | Ethyl acrylate | 140-88-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U114 | Ethylenebisdithiocarbamic acid salts and esters | Ethylenebisdithiocarbamic acid | 111-54-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U115 | Ethylene oxide | Ethylene oxide | 75-21-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; or CMBST |
| | | Ethylene oxide; alternate[6] standard for wastewaters only | 75-21-8 | 0.12 | NA |
| U116 | Ethylene thiourea | Ethylene thiourea | 96-45-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U117 | Ethyl ether | Ethyl ether | 60-29-7 | 0.12 | 160 |
| U118 | Ethyl methacrylate | Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| U119 | Ethyl methane sulfonate | Ethyl methane sulfonate | 62-50-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U120 | Fluoranthene | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| U121 | Trichloromonofluoromethane | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| U122 | Formaldehyde | Formaldehyde | 50-00-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U123 | Formic acid | Formic acid | 64-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U124 | Furan | Furan | 110-00-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U125 | Furfural | Furfural | 98-01-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U126 | Glycidylaldehyde | Glycidylaldehyde | 765-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U127 | Hexachlorobenzene | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| U128 | Hexachlorobutadiene | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| U129 | Lindane | alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| | | beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| | | delta-BHC | 319-86-8 | 0.023 | 0.066 |
| | | gamma-BHC (Lindane) | 58-89-9 | 0.0017 | 0.066 |
| U130 | Hexachlorocyclopentadiene | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| U131 | Hexachloroethane | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| U132 | Hexachlorophene | Hexachlorophene | 70-30-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U133 | Hydrazine | Hydrazine | 302-01-2 | CHOXD; CHRED; CARBN; DIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U134 | Hydrogen fluoride | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | ADGAS fb NEUTR; or NEUTR |
| U135 | Hydrogen Sulfide | Hydrogen Sulfide | 7783-06-4 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U136 | Cacodylic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| U137 | Indeno(1,2,3-cd)pyrene | Indeno(1,2,3-c, d)pyrene | 193-39-5 | 0.0055 | 3.4 |
| U138 | Iodomethane | Iodomethane | 74-88-4 | 0.19 | 65 |
| U140 | Isobutyl alcohol | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| U141 | Isosafrole | Isosafrole | 120-58-1 | 0.081 | 2.6 |
| U142 | Kepone | Kepone | 143-50-8 | 0.0011 | 0.13 |
| U143 | Lasiocarpine | Lasiocarpine | 303-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U144 | Lead acetate | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| U145 | Lead phosphate | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| U146 | Lead subacetate | Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| U147 | Maleic anhydride | Maleic anhydride | 108-31-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U148 | Maleic hydrazide | Maleic hydrazide | 123-33-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U149 | Malononitrile | Malononitrile | 109-77-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U150 | Melphalan | Melphalan | 148-82-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U151 | U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All U151 (mercury) wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| | Elemental Mercury Contaminated with Radioactive Materials | Mercury | 7439-97-6 | NA | AMLGM |
| U152 | Methacrylonitrile | Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| U153 | Methanethiol | Methanethiol | 74-93-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U154 | Methanol | Methanol | 67-56-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| | | Methanol, alternate[6] set of standards for both wastewaters and nonwastewaters | 67-56-1 | 5.6 | 0.75 mg/l TCLP |
| U155 | Methapyrilene | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| U156 | Methyl chlorocarbonate | Methyl chlorocarbonate | 79-22-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U157 | 3-Methylcholanthrene | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| U158 | 4,4'-Methylene bis(2-chloroaniline) | 4,4'-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| U159 | Methyl ethyl ketone | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| U160 | Methyl ethyl ketone peroxide | Methyl ethyl ketone peroxide | 1338-23-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U161 | Methyl isobutyl ketone | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| U162 | Methyl methacrylate | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| U163 | N-Methyl N'-nitro N-nitrosoguanidine | N-Methyl N'-nitro N-nitrosoguanidine | 70-25-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U164 | Methylthiouracil | Methylthiouracil | 56-04-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U165 | Naphthalene | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| U166 | 1,4-Naphthoquinone | 1,4-Naphthoquinone | 130-15-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U167 | 1-Naphthlyamine | 1-Naphthlyamine | 134-32-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U168 | 2-Naphthlyamine | 2-Naphthlyamine | 91-59-8 | 0.52 | CMBST |
| U169 | Nitrobenzene | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| U170 | p-Nitrophenol | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| U171 | 2-Nitropropane | 2-Nitropropane | 79-46-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U172 | N-Nitrosodi-n-butylamine | N-Nitrosodi-n-butylamine | 924-16-3 | 0.40 | 17 |
| U173 | N-Nitrosodiethanolamine | N-Nitrosodiethanolamine | 1116-54-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U174 | N-Nitrosodiethylamine | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| U176 | N-Nitroso-N-ethylurea | N-Nitroso-N-ethylurea | 759-73-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U177 | N-Nitroso-N-methylurea | N-Nitroso-N-methylurea | 684-93-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U178 | N-Nitroso-N-methylurethane | N-Nitroso-N-methylurethane | 615-53-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U179 | N-Nitrosopiperidine | N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| U180 | N-Nitrosopyrrolidine | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| U181 | 5-Nitro-o-toluidine | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| U182 | Paraldehyde | Paraldehyde | 123-63-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U183 | Pentachlorobenzene | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| U184 | Pentachloroethane | Pentachloroethane | 76-01-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | Pentachloroethane; alternate[6] standards for both waste-waters and nonwastewaters | 76-01-7 | 0.055 | 6.0 |
| U185 | Pentachloronitrobenzene | Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| U186 | 1,3-Pentadiene | 1,3-Pentadiene | 504-60-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U187 | Phenacetin | Phenacetin | 62-44-2 | 0.081 | 16 |
| U188 | Phenol | Phenol | 108-95-2 | 0.039 | 6.2 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U189 | Phosphorus sulfide | Phosphorus sulfide | 1314-80-3 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U190 | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride | 85-44-9 | 0.055 | 28 |
| U191 | 2-Picoline | 2-Picoline | 109-06-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U192 | Pronamide | Pronamide | 23950-58-5 | 0.093 | 1.5 |
| U193 | 1,3-Propane sultone | 1,3-Propane sultone | 1120-71-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U194 | n-Propylamine | n-Propylamine | 107-10-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U196 | Pyridine | Pyridine | 110-86-1 | 0.014 | 16 |
| U197 | p-Benzoquinone | p-Benzoquinone | 106-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U200 | Reserpine | Reserpine | 50-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U201 | Resorcinol | Resorcinol | 108-46-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U202 | Saccharin and salts | Saccharin | 81-07-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U203 | Safrole | Safrole | 94-59-7 | 0.081 | 22 |
| U204 | Selenium dioxide | Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |
| U205 | Selenium sulfide | Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U206 | Streptozotocin | Streptozotocin | 18883-66-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U207 | 1,2,4,5-Tetrachlorobenzene | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| U208 | 1,1,1,2-Tetrachloroethane | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| U209 | 1,1,2,2-Tetrachloroethane | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| U210 | Tetrachloroethylene | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| U211 | Carbon tetrachloride | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| U213 | Tetrahydrofuran | Tetrahydrofuran | 109-99-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U214 | Thallium (I) acetate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U215 | Thallium (I) carbonate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U216 | Thallium (I) chloride | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U217 | Thallium (I) nitrate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U218 | Thioacetamide | Thioacetamide | 62-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U219 | Thiourea | Thiourea | 62-56-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U220 | Toluene | Toluene | 108-88-3 | 0.080 | 10 |
| U221 | Toluenediamine | Toluenediamine | 25376-45-8 | CARBN; or CMBST | CMBST |
| U222 | o-Toluidine hydrochloride | o-Toluidine hydrochloride | 636-21-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U223 | Toluene diisocyanate | Toluene diisocyanate | 26471-62-5 | CARBN; or CMBST | CMBST |
| U225 | Bromoform (Tribromomethane) | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U226 | 1,1,1-Trichloroethane | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| U227 | 1,1,2-Trichloroethane | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| U228 | Trichloroethylene | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| U234 | 1,3,5-Trinitrobenzene | 1,3,5-Trinitrobenzene | 99-35-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U235 | tris-(2,3-Dibromopropyl)-phosphate | tris-(2,3-Dibromopropyl)-phosphate | 126-72-7 | 0.11 | 0.10 |
| U236 | Trypan Blue | Trypan Blue | 72-57-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U237 | Uracil mustard | Uracil mustard | 66-75-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U238 | Urethane (Ethyl carbamate) | Urethane (Ethyl carbamate) | 51-79-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U239 | Xylenes | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations). | 1330-20-7 | 0.32 | 30 |
| U240 | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | 2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters | | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U243 | Hexachloropropylene | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| U244 | Thiram | Thiram | 137-26-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U246 | Cyanogen bromide | Cyanogen bromide | 506-68-3 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| U247 | Methoxychlor | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| U248 | Warfarin, & salts, when present at concentrations of 0.3% or less. | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U249 | Zinc phosphide, $Zn_3P_2$, when present at concentrations of 10% or less. | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U271 | Benomyl [9] | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| U278 | Bendiocarb [9] | Bendiocarb | 22781-23-3 | 0.056 | 1.4 |
| U279 | Carbaryl [9] | Carbaryl | 63-25-2 | 0.006 | 0.14 |
| U280 | Barban [9] | Barban | 101-27-9 | 0.056 | 1.4 |
| U328 | o-Toluidine | o-Toluidine | 95-53-4 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN. | CMBST |
| U353 | p-Toluidine | p-Toluidine | 106-49-0 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN. | CMBST |
| U359 | 2-Ethoxyethanol | 2-Ethoxyethanol | 110-80-5 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |
| U364 | Bendiocarb phenol [9] | Bendiocarb phenol | 22961-82-6 | 0.056 | 1.4 |
| U367 | Carbofuran phenol [9] | Carbofuran phenol | 1563-38-8 | 0.056 | 1.4 |
| U372 | Carbendazim [9] | Carbendazim | 10605-21-7 | 0.056 | 1.4 |
| U373 | Propham [9] | Propham | 122-42-9 | 0.056 | 1.4 |
| U387 | Prosulfocarb [9] | Prosulfocarb | 52888-80-9 | 0.042 | 1.4 |
| U389 | Triallate [9] | Triallate | 2303-17-5 | 0.042 | 1.4 |
| U394 | A2213 [9] | A2213 | 30558-43-1 | 0.042 | 1.4 |
| U395 | Diethylene glycol, dicarbamate [9] | Diethylene glycol, dicarbamate | 5952-26-1 | 0.056 | 1.4 |
| U404 | Triethylamine [9] | Triethylamine | 101-44-8 | 0.081 | 1.5 |

SECTION NR 675.20 TREATMENT STANDARDS FOR HAZARDOUS WASTES

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NON-WASTEWATERS |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] No. | Concentration mg/l[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/l TCLP"; or Technology Code |
| U409 | Thiophanate-methyl [9] | Thiophanate-methyl | 23564-05-8 | 0.056 | 1.4 |
| U410 | Thiodicarb [9] | Thiodicarb | 59669-26-0 | 0.019 | 1.4 |
| U411 | Propoxur [9] | Propoxur | 114-26-1 | 0.056 | 1.4 |

Note: NA means not applicable

Notes to Table:

[1] The waste descriptions provided in this table do not replace waste descriptions in ch. NR 605. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.

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

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

[4] All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in s. NR 675.22 Table 1--Technology Codes and Descriptions of Technology-Based Standards.

[5] Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of ch. NR 665, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in s. NR 675.20(4). All concentration standards for nonwastewaters are based on analysis of grab samples.

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

[7] Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in s. NR 600.10(2)(b)1. and (c), with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

[8] These wastes, when rendered nonhazardous and then subsequently managed in systems subject to ch. 283, Stats., are not subject to treatment standards.

[9] Between August 26, 1996 and August 27, 1997, the treatment standard for this waste may be satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at s. NR 675.22 Table 1, for nonwastewaters; and biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at s. NR 675.22 Table 1, for wastewaters.

SECTION 175. NR 675.21 is repealed and recreated to read:

NR 675.21 TREATMENT STANDARDS EXPRESSED AS CONCENTRATIONS IN WASTE EXTRACT.

Note: For the requirements and for treatment standards in Table CCWE-Constituent Concentrations in Waste Extracts, both of which were found in this section until [Revisor - insert effective date of this rule] refer to s. NR 675.20.

SECTION 176. NR 675.22(intro.)(Note) [to appear before sub. (1)] is created to read:

NR 675.22(intro.)Note: For the requirements found in this section until [Revisor - insert effective date of this rule] in Table 2-Technology-Based Standards By RCRA Waste Code, and Table 3-Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to s. NR 675.20.

SECTION 177. NR 675.22(1)(intro.) is amended to read:

NR 675.22(1)(intro.) The following wastes in pars. (a) and (b) and in ~~tables 2 and 3~~ the table in s. NR 675.20 "Treatment Standards for Hazardous Wastes," for which standards are expressed as a treatment method rather than a concentration level, shall be treated using the identified technology or technologies in pars. (a) and (b) and table 1.

SECTION 178. NR 675.22 Table 1 Entry "CMBST" is created to read:

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

| Technology code | Description of technology-based standards |
|---|---|
| * * * * * * | |
| CMBST: | High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of ch. NR 665 or 40 CFR part 266, subpart H, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process. |

SECTION 179. NR 675.22 Table 2 and Table 3 are repealed.

SECTION 180. NR 675.22(4)(b) and (5) are amended to read:

NR 675.22(4)(b) ~~All hazardous wastes contained in the~~ The lab ~~packs are specified~~ pack does not contain any of the wastes listed in Appendix III ~~or IV~~;

(5) Radioactive hazardous mixed wastes ~~with treatment standards specified in table 3 are not subject to any treatment standards specified in s. NR 675.21, 675.23 or table 2~~ are subject to the treatment standards in s. NR 675.20. ~~Radioactive hazardous mixed wastes not~~

~~subject to treatment standards in table 3 of this section remain subject to all applicable treatment standards specified in ss. NR 675.21, 675.23 and table 2. Hazardous debris containing radioactive waste is not subject to the treatment standards specified in Table 3 of this section but is subject to the treatment standards specified in 40 CFR s. 268.45.~~ Where treatment standards are specified for radioactive mixed wastes in the table "Treatment Standards for Hazardous Wastes," 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 waste code, applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in s. NR 675.25.

SECTION 181. NR 675.23 is repealed and recreated to read:

NR 675.23 TREATMENT STANDARDS EXPRESSED AS WASTE CONCENTRATIONS.

Note: For the requirements and for treatment standards in Table CCW-Constituent Concentrations in Wastes, both of which were found in this section until [Revisor - insert effective date of this rule] refer to s. NR 675.20.

SECTION 182. NR 675.24(1)(a) is amended to read:

NR 675.24(1)(a) Where the treatment standard is expressed as a concentration in a waste or waste extract and a waste cannot be treated to the specified level, or where the treatment technology is not appropriate to the waste, the generator or treatment facility may petition EPA for a variance from the treatment standard under 40 CFR 268.44, July 1, ~~1993~~ 1996. The petitioner shall demonstrate that because the physical or chemical properties of the waste differ significantly from wastes analyzed in developing the treatment standard, the waste cannot be treated to specified levels or by the specified methods. The petitioner may also demonstrate that it is treating underlying hazardous constituents in characteristically hazardous wastewaters by sending the waste to a properly designed and operated BAT/PSES system, which may not be achieving the treatment standards found in s. NR 675.28.

SECTION 183. NR 675.25(2)(b) is amended to read:

NR 675.15(2)(b) Debris contaminated with listed waste. The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which ~~BDAT~~ treatment standards are established for the waste under ~~ss. NR 675.21 and 675.23~~ s. NR 675.20.

SECTION 184. NR 675.26 is repealed and recreated to read:

NR 675.26 ALTERNATIVE TREATMENT STANDARDS BASED ON HTMR.

Note: For the treatment standards found in this section until [Revisor - insert effective date of this rule], refer to s. NR 675.20.

SECTION 185. NR 675.28 is created to read:

NR 675.28 UNIVERSAL TREATMENT STANDARDS. Table Universal Treatment Standards 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, 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 Universal Treatment Standards.

Section NR 675.28 -- Universal Treatment Standards

| Regulated constituent/common name | CAS[1] number | Wastewater standard | Nonwastewater standard |
|---|---|---|---|
| | | Concentration in mg/l[2] | Concentration in mg/kg[3] unless noted as "mg/l TCLP" |
| I. Organic constituents: | | | |
| A2213 [6] | 30558-43-1 | 0.042 | 1.4 |
| Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| Acetone | 67-64-1 | 0.28 | 160 |
| Acetonitrile | 75-05-8 | 5.6 | 38 |
| Acetophenone | 96-86-2 | 0.010 | 9.7 |
| 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| Acrolein | 107-02-8 | 0.29 | NA |
| Acrylamide | 79-06-1 | 19 | 23 |
| Acrylonitrile | 107-13-1 | 0.24 | 84 |
| Aldicarb sulfone [6] | 1646-88-4 | 0.056 | 0.28 |
| Aldrin | 309-00-2 | 0.021 | 0.066 |
| 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| Aniline | 62-53-3 | 0.81 | 14 |
| Anthracene | 120-12-7 | 0.059 | 3.4 |
| Aramite | 140-57-8 | 0.36 | NA |
| alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| delta-BHC | 319-86-8 | 0.023 | 0.066 |
| gamma-BHC | 58-89-9 | 0.0017 | 0.066 |
| Barban [6] | 101-27-9 | 0.056 | 1.4 |

| | | | |
|---|---|---|---|
| Bendiocarb [6] | 22781-23-3 | 0.056 | 1.4 |
| Bendiocarb phenol [6] | 22961-82-6 | 0.056 | 1.4 |
| Benomyl [6] | 17804-35-2 | 0.056 | 1.4 |
| Benzene | 71-43-2 | 0.14 | 10 |
| Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| Benzal chloride | 98-87-3 | 0.055 | 6.0 |
| Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| Bromodichloromethane | 75-27-4 | 0.35 | 15 |
| Bromomethane/Methyl bromide | 74-83-9 | 0.11 | 15 |
| 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| Butylate [6] | 2008-41-5 | 0.042 | 1.4 |
| Butyl benzyl phthalate | 85-68-7 | 0.017 | 28 |
| 2-sec-Butyl-4,6-dinitrophenol/Dinoseb | 88-85-7 | 0.066 | 2.5 |
| Carbaryl [6] | 63-25-2 | 0.006 | 0.14 |
| Carbenzadim [6] | 10605-21-7 | 0.056 | 1.4 |
| Carbofuran [6] | 1563-66-2 | 0.006 | 0.14 |
| Carbofuran phenol [6] | 1563-38-8 | 0.056 | 1.4 |
| Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/l TCLP |
| Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| Carbosulfan [6] | 55285-14-8 | 0.028 | 1.4 |
| Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| Chlorobenzilate | 510-15-6 | 0.10 | NA |
| 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | 0.28 |
| Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| Chloroethane | 75-00-3 | 0.27 | 6.0 |
| bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| Chloroform | 67-66-3 | 0.046 | 6.0 |
| bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | NA |
| Chloromethane/Methyl chloride | 74-87-3 | 0.19 | 30 |
| 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |

| | | | |
|---|---|---|---|
| 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| Chrysene | 218-01-9 | 0.059 | 3.4 |
| o-Cresol | 95-48-7 | 0.11 | 5.6 |
| m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| m-Cumenyl methylcarbamate [6] | 64-00-6 | 0.056 | 1.4 |
| Cyclohexanone | 108-94-1 | 0.36 | 0.75 mg/l TCLP |
| o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| Dibenz(a,e)pyrene | 192-65-4 | 0.061 | NA |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| 1,2-Dibromoethane/Ethylene dibromide | 106-93-4 | 0.028 | 15 |
| Dibromomethane | 74-95-3 | 0.11 | 15 |
| m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| 2,4-Dichlorophenoxyacetic acid/2,4-D | 94-75-7 | 0.72 | 10 |
| 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| Dieldrin | 60-57-1 | 0.017 | 0.13 |
| Diethylene glycol, dicarbamate [6] | 5952-26-1 | 0.056 | 1.4 |
| Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | NA |
| 2-4-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| Dimetilan [6] | 644-64-4 | 0.056 | 1.4 |

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|---|---|---|---|
| Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |
| 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| 1,4-Dioxane | 123-91-1 | 12.0 | 170 |
| Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| 1,2-Diphenylhydrazine | 122-66-7 | 0.087 | NA |
| Disulfoton | 298-04-4 | 0.017 | 6.2 |
| Dithiocarbamates (total) [6] | 137-30-4 | 0.028 | 28 |
| Endosulfan I | 959-98-8 | 0.023 | 0.066 |
| Endosulfan II | 33213-65-9 | 0.029 | 0.13 |
| Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| Endrin | 72-20-8 | 0.0028 | 0.13 |
| Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| EPTC [6] | 759-94-4 | 0.042 | 1.4 |
| Ethyl acetate | 141-78-6 | 0.34 | 33 |
| Ethyl benzene | 100-41-4 | 0.057 | 10 |
| Ethyl cyanide/Propanenitrile | 107-12-0 | 0.24 | 360 |
| Ethyl ether | 60-29-7 | 0.12 | 160 |
| bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| Ethylene oxide | 75-21-8 | 0.12 | NA |
| Famphur | 52-85-7 | 0.017 | 15 |
| Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| Fluorene | 86-73-7 | 0.059 | 3.4 |
| Formetanate hydrochloride [6] | 23422-53-9 | 0.056 | 1.4 |
| Formparanate [6] | 17702-57-7 | 0.056 | 1.4 |
| Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |

| | | | |
|---|---|---|---|
| Hexachloroethane | 67-72-1 | 0.055 | 30 |
| Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| Iodomethane | 74-88-4 | 0.19 | 65 |
| Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| Isodrin | 465-73-6 | 0.021 | 0.066 |
| Isolan [6] | 119-38-0 | 0.056 | 1.4 |
| Isosafrole | 120-58-1 | 0.081 | 2.6 |
| Kepone | 143-50-0 | 0.0011 | 0.13 |
| Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| Methanol | 67-56-1 | 5.6 | 0.75 mg/l TCLP |
| Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| Methiocarb [6] | 2032-65-7 | 0.056 | 1.4 |
| Methomyl [6] | 16752-77-5 | 0.028 | 0.14 |
| Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| 3-Methylchlolanthrene | 56-49-5 | 0.0055 | 15 |
| 4,4-Methylene bis(2-chloroaniline | 101-14-4 | 0.50 | 30 |
| Methylene chloride | 75-09-2 | 0.089 | 30 |
| Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| Methyl methansulfonate | 66-27-3 | 0.018 | NA |
| Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| Metolcarb [6] | 1129-41-5 | 0.056 | 1.4 |
| Mexacarbate [6] | 315-18-4 | 0.056 | 1.4 |
| Molinate [6] | 2212-67-1 | 0.042 | 1.4 |
| Naphthalene | 91-20-3 | 0.059 | 5.6 |
| 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| o-Nitroaniline | 88-74-4 | 0.27 | 14 |
| p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| Nitrobenzene | 98-95-3 | 0.068 | 14 |
| 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |
| N-Nitrosomethylethylamine | 10595-95-6 | 0.40 | 2.3 |
| N-Nitrosomorpholine | 59-89-2 | 0.40 | 2.3 |
| N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |

| | | | |
|---|---|---|---|
| N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| Oxamyl [6] | 23135-22-0 | 0.056 | 0.28 |
| Parathion | 56-38-2 | 0.014 | 4.6 |
| Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| Pebulate [6] | 1114-71-2 | 0.042 | 1.4 |
| Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| PeCDFs (All Pentachlorodibenzo-furans) | NA | 0.000035 | 0.001 |
| Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| Phenacetin | 62-44-2 | 0.081 | 16 |
| Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| Phenol | 108-95-2 | 0.039 | 6.2 |
| o-Phenylenediamine [6] | 95-54-5 | 0.056 | 5.6 |
| Phorate | 298-02-2 | 0.021 | 4.6 |
| Phthalic acid | 100-21-0 | 0.055 | 28 |
| Phthalic anhydride | 85-44-9 | 0.055 | 28 |
| Physostigmine [6] | 57-47-6 | 0.056 | 1.4 |
| Physostigmine salicylate [6] | 57-64-7 | 0.056 | 1.4 |
| Promecarb [6] | 2631-37-0 | 0.056 | 1.4 |
| Pronamide | 23950-58-5 | 0.093 | 1.5 |
| Propham [6] | 122-42-9 | 0.056 | 1.4 |
| Propoxur [6] | 114-26-1 | 0.056 | 1.4 |
| Prosulfocarb [6] | 52888-80-9 | 0.042 | 1.4 |
| Pyrene | 129-00-0 | 0.067 | 8.2 |
| Pyridine | 110-86-1 | 0.014 | 16 |
| Safrole | 94-59-7 | 0.081 | 22 |
| Silvex/2,4,5-TP | 93-72-1 | 0.72 | 7.9 |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| Thiodicarb [6] | 59669-26-0 | 0.019 | 1.4 |
| Thiophanate-methyl [6] | 23564-05-8 | 0.056 | 1.4 |
| Tirpate [6] | 26419-73-8 | 0.056 | 0.28 |
| Toluene | 108-88-3 | 0.080 | 10 |

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|---|---|---|---|
| Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| Triallate [6] | 2303-17-5 | 0.042 | 1.4 |
| Tribromomethane/Bromoform | 75-25-2 | 0.63 | 15 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| 1,1,1-Trichlorethane | 71-55-6 | 0.054 | 6.0 |
| 1,1,2-Trichlorethane | 79-00-5 | 0.054 | 6.0 |
| Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| 2,4,5-Trichlorophenoxyacetic acid/2,4,5-T | 93-76-5 | 0.72 | 7.9 |
| 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| Triethylamine [6] | 101-44-8 | 0.081 | 1.5 |
| tris-(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | 0.10 |
| Vernolate [6] | 1929-77-7 | 0.042 | 1.4 |
| Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| II. Inorganic Constituents: | | | |
| Antimony | 7440-36-0 | 1.9 | 2.1 mg/l TCLP |
| Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| Barium | 7440-39-3 | 1.2 | 7.6 mg/l TCLP |
| Beryllium | 7440-41-7 | 0.82 | 0.014 mg/l TCLP |
| Cadmium | 7440-43-9 | 0.69 | 0.19 mg/l TCLP |
| Chromium (Total) | 7440-47-3 | 2.77 | 0.86 mg/l TCLP |
| Cyanides (Total) [4] | 57-12-5 | 1.2 | 590 |
| Cyanides (Amenable) [4] | 57-12-5 | 0.86 | 30 |
| Fluoride [5] | 16984-48-8 | 35 | NA |
| Lead | 7439-92-1 | 0.69 | 0.37 mg/l TCLP |
| Mercury--Nonwastewater from Retort | 7439-97-6 | NA | 0.20 mg/l TCLP |
| Mercury--All Others | 7439-97-6 | 0.15 | 0.25 mg/l TCLP |
| Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| Selenium | 7782-49-2 | 0.82 | 0.16 mg/l TCLP |
| Silver | 7440-22-4 | 0.43 | 0.30 mg/l TCLP |
| Sulfide | 18496-25-8 | 14 | NA |
| Thallium | 7440-28-0 | 1.4 | 0.078 mg/l TCLP |
| Vanadium [4] | 7440-62-2 | 4.3 | 0.23 mg/l TCLP |
| Zinc [5] | 7440-66-6 | 2.61 | 5.3 mg/l TCLP |

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

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

[3] Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of ch. NR 665, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to s. NR 675.20(4). All concentration standards for nonwastewaters are based on analysis of grab samples.

[4] Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in s. NR 600.10(2)(b)1. and (c), with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

[5] These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at s. NR 675.03(7p).

[6] Between August 26, 1997 and August 26, 1998, these constituents are not underlying hazardous constituents as defined at s. NR 675.03(7p).

Note: NA means not applicable.

SECTION 186. Chapter NR 675 Appendix III is repealed and recreated to read:

Chapter NR 675

Appendix III

Wastes Excluded From Lab Packs Under the Alternative Treatment Standards of s. NR 675.22(3)

Hazardous waste with the following Hazardous Waste Codes may not be placed in lab packs under the alternative lab pack treatment standards of s. NR 675.22(3): D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134 and U151.

SECTION 187. Chapter NR 675 Appendix IV is repealed.

SECTION 188. Chapter NR 675 Appendix VIII and Appendix IX are created to read:

Chapter NR 675
Appendix VIII
Certification Statements

A. 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 ss. NR 675.20 to 675.28 and all applicable prohibitions set forth in s. NR 675.13 or RCRA section 3004(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 fine and imprisonment. [Section NR 675.07(1)(e)2.]

B. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at ch. NR 675, Appendix III, Wis. Adm. Code. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment. [Section NR 675.07(1)(k)]

C. 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 that, 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 performance levels specified in ss. NR 675.20 to 675.28, and all applicable prohibitions set forth in s. NR 675.13 or RCRA section 3004(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. [Section NR 675.07(2)(e)1.]

D. I certify under penalty of law that the waste has been treated in accordance with the requirements of s. NR 675.22. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. [Section NR 675.07(2)(e)2.]

E. 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 that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with ch. NR 665, or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and 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 that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. [Section NR 675.07(2)(e)3.]

F. I certify under penalty of law that the waste has been treated in accordance with the requirements of s. NR 675.20 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. [Section NR 675.07(2)(e)4.]

G. I certify under penalty of law that the debris has been treated in accordance with the requirements of s. NR 675.25. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment. [Section NR 675.07(2)(e)5.]

Chapter NR 675
Appendix IX
Metal Bearing Wastes Prohibited from Dilution in a Combustion Unit According to s. NR 675.40 CFR 268.3(b)[1]

| Waste code | Waste description |
|---|---|
| D004 | Toxicity characteristic for Arsenic. |
| D005 | Toxicity characteristic for Barium. |
| D006 | Toxicity characteristic for Cadmium. |
| D007 | Toxicity characteristic for Chromium. |
| D008 | Toxicity characteristic for Lead. |
| D009 | Toxicity characteristic for Mercury. |
| D010 | Toxicity characteristic for Selenium. |
| D011 | Toxicity characteristic for Silver. |
| F006 | Wastewater treatment sludges from electroplating operations except for the following processes: (1) sulfulric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. |
| F007 | Spent cyanide plating bath solutions from electroplating operations. |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. |
| F010 | Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process. |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. |
| F012 | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. |
| F019 | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process. |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments. |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated). |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. |
| K008 | Oven residue from the production of chrome oxide green pigments. |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces. |
| K069 | Emission control dust/sludge from secondary lead smelting. |
| K071 | Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used. |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. |
| K106 | Sludges from the mercury cell processes for making chlorine. |

| | |
|---|---|
| P010 | Arsenic acid $H_3AsO_4$. |
| P011 | Arsenic oxide $As_2O_5$. |
| P012 | Arsenic trioxide. |
| P013 | Barium cyanide. |
| P015 | Beryllium. |
| P029 | Copper cyanide CU(CN). |
| P074 | Nickel cyanide $Ni(CN)_2$. |
| P087 | Osmium tetroxide. |
| P099 | Potassium silver cyanide. |
| P104 | Silver cyanide. |
| P113 | Thallic oxide. |
| P114 | Thallium (l) selenite. |
| P115 | Thallium (l) sulfate. |
| P119 | Ammonium vanadate. |
| P120 | Vanadium oxide $V_2O_5$. |
| P121 | Zinc cyanide. |
| U032 | Calcium chromate. |
| U145 | Lead phosphate. |
| U151 | Mercury. |
| U204 | Selenious acid. |
| U205 | Selenium disulfide. |
| U216 | Thallium (l) chloride. |
| U217 | Thallium (l) nitrate. |

[1] A combustion unit is defined as any thermal technology subject to ch. NR 665 or 40 CFR part 266 subpart H.

SECTION 189. NR 680.02 is amended to read:

NR 680.02 APPLICABILITY. Except as otherwise provided, this chapter applies to recycling, storage, treatment or disposal facilities that manage hazardous waste. This chapter does not apply to solid waste facilities that manage only non-hazardous solid waste or metallic mining waste resulting from a mining operation as defined in s. ~~144.81(5)~~ 293.01(9), Stats., or to universal waste handlers and universal waste transporters. These handlers and transporters are subject to regulation under ch. NR 690, when handling these universal wastes.

Note: The provisions of this chapter are consistent with, and in some instances identical to, federal regulations found in 40 CFR parts 124, 260 to 265, ~~and~~ 270 and 273, July 1, ~~1993~~ 1996.

Note: The publication containing the CFR references may be obtained from:

Superintendent of Documents
U.S. Government Printing Office
P.O. Box 371954
Pittsburgh, PA 15250-7954
(202) 512-1800

This document is available for inspection at the offices of the department, the secretary of state, and the revisor of statutes.

SECTION 190. NR 680.03(3m) is created to read:

NR 680.03(3m) "Facility mailing list" means the mailing list for a facility maintained by the department in accordance with s. NR 680.06(10)(a)3.

SECTION 191. NR 680.06(1m) is created to read:

NR 680.06(1m) PRE-APPLICATION PUBLIC MEETING AND NOTICE. (a) This subsection applies to all feasibility reports or feasibility or plan of operation reports for hazardous waste management units. This subsection also applies to feasibility reports or feasibility or plan of operation reports seeking renewal of licenses for the units, where the renewal application is proposing a significant change in facility operations. This subsection does not apply to modifications of licenses or plan approvals under s. NR 680.07 or to applications that are submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility.

Note: For the purposes of this section, a "significant change" is any change that would qualify as a class 3 modification under s. NR 680.07(3).

(b) Prior to the submission of a feasibility report or feasibility or plan of operation report for a facility, the applicant shall hold at least one public meeting in order to solicit questions from the community and inform the community of proposed hazardous waste management activities. The applicant shall post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

(c) The applicant shall submit a summary of the meeting, along with the list of attendees and their addresses developed under par. (b), and copies of any written comments or materials submitted at the meeting, to the permitting agency as a part of the feasibility report or feasibility or plan of operation report, in accordance with this section.

(d) The applicant shall provide public notice of the pre-application meeting at least 30 days prior to the meeting. The applicant shall maintain, and provide to the department upon request, documentation of the notice.

1. The applicant shall provide public notice in all of the following forms:

a. A newspaper advertisement. The applicant shall publish a notice, fulfilling the requirements in subd. 2., in a newspaper of general circulation in the county or equivalent jurisdiction in which the proposed facility would be located. In addition, the department shall instruct the applicant to publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdictions, where the department determines that such publication is necessary to inform the affected public. The notice shall be published as a display advertisement.

b. A visible and accessible sign. The applicant shall post a notice on a clearly marked sign at or near the facility, fulfilling the requirements of subd. 2. If the applicant places the sign on the facility property, then the sign shall be large enough to be readable from the nearest point where the public would pass by the site.

c. A broadcast media announcement. The applicant shall broadcast a notice, fulfilling the requirements in subd. 2., at least once on at least one local radio station or television station. The applicant may employ another medium with prior approval of the department.

d. A notice to the permitting agency. The applicant shall send a copy of the newspaper notice to the permitting agency and to the appropriate units of state and local government, in accordance with sub. (12)(a)4.

2. The notices required by subd. 1. shall include all of the following:

a. The date, time and location of the meeting.

b. A brief description of the purpose of the meeting.

c. A brief description of the facility and proposed operations, including the address or a map of the facility location.

Note: A map of the facility location may be either a sketched or copied street map.

d. A statement encouraging any person who needs special access to participate in the meeting to contact the facility at least 72 hours before the meeting.

e. The name, address and telephone number of a contact person for the applicant.

SECTION 192. NR 680.06(3)(e) and (k) are amended to read:

NR 680.06(3)(e) A copy of the general inspection schedule required by s. NR 630.15(2). Include where applicable, as part of the inspection schedule, specific requirements in ss. NR 631.06(2); 632.06(1), (2) and (7); 633.11; 633.14; 640.12(1); 645.09(11); 645.11; 655.08; 660.18(13), (31)(a) and (32); and 670.09.

(k) For facilities or units where hazardous wastes were disposed of before the submittal of the feasibility report, a copy of the survey plat and record of the type, location and quantity of those wastes, and documentation that this was submitted to the register of deeds, as required by s. NR ~~685.06(8)~~ 685.05(10).

SECTION 193. NR 680.06(3)(n), (8m) and (15) are created to read:

NR 680.06(3)(n) A summary of the pre-application meeting, along with a list of attendees and their addresses, and copies of any written comments or materials submitted at the meeting, as required under s. NR 680.06(1m)(c).

(8m) PUBLIC NOTICE REQUIREMENTS AT THE APPLICATION STAGE. (a) Applicability. This subsection applies to all feasibility report or feasibility or plan of operation reports seeking initial licenses for hazardous waste management units. This subsection applies to feasibility report or feasibility or plan of operation reports seeking renewal of licenses for the units under s. NR 680.45(3). This subsection does not apply to modifications of licenses or plan approvals under s. NR 680.07 or plan modification applications submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility.

(b) Notification at application submittal. 1. The department shall provide public notice as set forth in s. NR 680.06(10)(a)3., and notice to appropriate units of state and local government as set forth in s. NR 680.06(12)(a)4., that a feasibility report or feasibility or plan of operation report has been submitted to the department and is available for review.

2. The notice shall be published within a reasonable period of time after the application is received by the department. The notice shall include all of the following:

a. The name and telephone number of the applicant's contact person.

b. The name and telephone number of the department's contact office, and a mailing address to which information, opinions and inquiries may be directed throughout the application review process.

c. An address to which a person may write in order to be put on the facility mailing list.

d. The location where copies of the application and any supporting documents can be viewed and copied.

e. A brief description of the facility and proposed operations, including the address or a map of the facility location on the front page of the notice.

Note: The map of the facility location may be either a sketched or copied street map.

f. The date that the application was submitted.

(c) Public access to application. Concurrent with the notice required by par. (b), the department shall place the application and any supporting documents in a location accessible to the public in the vicinity of the facility or at the department's office.

(15) INFORMATION REPOSITORY. This subsection applies to all feasibility reports or feasibility or plan of operation reports seeking operating licenses for hazardous waste management units.

(a) The department may assess the need, on a case-by-case basis, for an information repository. When assessing the need for an information repository, the department shall consider a variety of factors, including the level of public interest; the type of facility; the presence of an existing repository; and the proximity to the nearest copy of the administrative record. If the department determines, at any time after submittal of a permit application, that there is a need for a repository, then the department shall notify the facility that it shall establish and maintain an information repository.

Note: See s. NR 680.06(18m) for similar provisions relating to the information repository during the life of a license.

(b) The information repository shall contain all documents, reports, data and information deemed necessary by the department to fulfill the purposes for which the repository is established. The department shall have the discretion to limit the contents of the repository.

(c) The information repository shall be located and maintained at a site chosen by the facility. If the department finds the site unsuitable for the purposes and persons for which it was established, due to problems with the location, hours of availability, access or other relevant considerations, then the department shall specify a more appropriate site.

(d) The department shall specify requirements for informing the public about the information repository. At a minimum, the department shall require the facility to provide a written notice about the information repository to all individuals on the facility mailing list.

(e) The facility owner or operator shall be responsible for maintaining and updating the repository with appropriate information throughout a time period specified by the department. The department may close the repository at his or her discretion, based on the factors in par. (a).

SECTION 194. NR 680.09(3)(a) is amended to read:

NR 680.09(3)(a) The owner or operator of a facility subject to sub. (1) shall pay an inspection fee of $50.00 per hour for each hour of time incurred by the department technical staff in conducting inspections and any associated work. Payment shall be made within 60 days of receipt of an itemized statement documenting the time ~~spend~~ spent and work performed.

SECTION 195. NR 680.22(36) is created to read:

NR 680.22(36) Air emission standards for tanks, surface impoundments, and containers in ch. NR 633, except s. NR 633.13.

SECTION 196. NR 680.40(2) is amended to read:

NR 680.40(2) Compliance with a license during its term constitutes compliance with ~~ss. 144.60 to 144.74~~ ch. 291, Stats., except for ~~those requirements not included in the license which become effective by statute, or which are set out in chs. NR 600 to 699 restricting the placement of hazardous wastes in or on the land.~~ the following requirements:

(a) Those requirements not included in the license which become effective by statute.

(b) Those requirements in chs. NR 600 to 699 restricting the placement of hazardous wastes in or on the land.

(c) Those requirements in ch. NR 633 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, CQA programs, monitoring, action leakage rates, and response action plans, and will be implemented through the procedures of s. NR 680.07 Class 1 permit modifications.

(d) Those requirements in chs. NR 631, 632 and 633 limiting air emissions.

Note: A license may be revoked during its term or its renewal may be denied for any of the reasons in s. NR 680.43(1) and (3). A license or a plan approval may be modified for cause, as set forth in s. NR 680.07(3).

SECTION 197. NR 680.42(18m) is created to read:

NR 680.42(18m) INFORMATION REPOSITORY. The department may require the licensee to establish and maintain an information repository at any time, based on the factors in s. NR 680.05(15)(a). The information repository will be governed by s. NR 680.06(15)(b) through (f).

SECTION 198. NR 680.45 Tables XII and XIII are amended to read:

## TABLE XII
## FEE SCHEDULE - ALL FACILITIES EXCEPT LANDFILLS AND SURFACE IMPOUNDMENTS

| | | | Plan Review Fees (1) (2) | | | | | | | | | | License Fees (3) (8) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | Commercial Fac. (10) | | Non-Commercial Fac. (11) | |
| ADM CODE | Facility Type | License Required | Plan Review Required | Interim License Report | Variance Report | Feasibility and Plan of Operation Rpt. (5) | Const Inspect | Site Const Doc | Closure Plan (6) | ~~Major~~ Class 2 Plan Mod. (4) | ~~Minor~~ Class 1 Plan Mod. (4) | Corr. Action (7) | Variance and Final License | Interim License (9) | Variance and Final License | Interim License (9) |
| 620 | Transporters | Yes | No | | | | | | | | | | 300 | | 300 | |
| 625 | Recycling | No | Yes | | | | | | | | | 1,200 | | | | |
| 640 | Container | Yes | Yes | 600 | 1,200 | 3,000 | 600 | 300 | 1,200 | 1,200 | 300 | 1,200 | 2,400 | 4,800 | 600 | 1,200 |
| 645 | Tanks | Yes | Yes | 600 | 1,200 | 4,800 | 600 | 600 | 1,800 | 1,200 | 300 | 1,200 | 2,400 | 4,800 | 600 | 1,200 |
| 655 | Waste Piles | Yes | Yes | 600 | 1,200 | 4,800 | 600 | 600 | 2,400 | 1,800 | 300 | 1,200 | 3,600 | 7,200 | 1,800 | 3,600 |
| 665 | Incinerators | Yes | Yes | 600 | 3,000 | 15,000 | 600 | 1,200 | 2,400 | 2,400 | 300 | 1,200 | 4,800 | 9,600 | 2,400 | 4,800 |
| 670 | Miscellaneous | Yes | Yes | 600 | 1,200 | 3,000 | 600 | 300 | 1,200 | 1,200 | 300 | 1,200 | 2,400 | 4,800 | 600 | 1,200 |

(1) In accordance with s. NR 680.05, all reports and plan sheets shall be made under the seal of a registered professional engineer. Reports where interpretation of geology or hydrogeology is necessary shall be signed by a hydrogeologist.

(2) The plan review fees specified in Table XIII cover the department's review from initial submittal through approval or denial of a report or plan. An applicant may revise or supplement a report or plan deemed incomplete and resubmit it without paying an additional review fee. The applicant shall pay a plan review fee as specified in Table XII for resubmittal of a plan which has been previously denied or withdrawn after having been determined to be complete. The department may waive any plan review fee if it determines that the total review time is not likely to exceed 4 hours.

(3) A facility must have a separate license for each hazardous waste management activity it conducts. Final licenses and variances must be renewed annually.

(4) A plan modification, as referred to in Table XII, is a submittal which proposes to modify a license, variance, or plan previously approved by the department.

(5) Certain small storage facilities may not be required to submit a feasibility and plan of operation report in accordance with s. NR 640.07.

(6) Applicants submitting a closure plan as part of a plan of operation or a feasibility and plan of operation report may not be required to pay the closure plan review fee.

(7) The owner or operator of the facility shall pay a total of ~~$1,000~~ $1,200 plan review fee for each phase of the corrective action program. The phases are facility investigation; selection of alternatives; and remedial design and operation.

(8) Any facility which cannot clean close will be required to obtain a closure and long-term care license and will be required to pay a ~~$5,000~~ $6,000 Closure and Long-Term Care License Fee. This is a one-time only fee to cover the entire 30-year long-term care period. Transportation services and recycling facilities are exempt from this requirement.

(9) This fee is a one-tie only payment to cover the interim license period until a final determination on the issuance of an operating license is made by the department.

(10) A commercial facility has the definition in s. NR 600.03(40).

(11) A non-commercial facility has the definition in s. NR 600.03(172).

## TABLE XIII
## FEE SCHEDULE - LANDFILLS AND SURFACE IMPOUNDMENTS

| | | | Plan Review Fees (1) (2) | | | | | | | | | | | License Fees (3) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ADM CODE | Facility Type | License Requ'd | Plan Review Requ'd | Interim License Report | Initial Site Report | Feas. Report | Plan of Operation Report | Const Inspect | Site Const Doc | Closure Plan (5) | Major Class 2 Plan Mod. (4) | Minor Class 1 Plan Mod. (4) | Corr. Action (7) | Final License | Interim License (9) | Closure and Long-term Care License (8) | Variance |
| 660 | Commercial Landfills & Surf Imp (10) | Yes | Yes | 1,200 | 12,000 | 90,000 | 30,000 | (6) | 3,000 | 18,000 | 3,000 | 600 | 6,000 | 30,000 | 60,000 | 60,000 | 1,000 |
| 660 | Non-Commercial Landfills & Surf Imp (11) | Yes | Yes | 600 | 3,600 | 24,000 | 8,400 | (6) | 1,200 | 6,000 | 1,800 | 180 | 1,200 | 8,400 | 17,000 | 24,000 | 1,000 |

(1) In accordance with s. NR 680.05, all reports and plan sheets shall be made under the seal of a registered professional engineer. Reports where interpretation of geology or hydrogeology is necessary shall be signed by a hydrogeologist.

(2) The plan review fees specified in Table XIII cover the department's review from initial submittal through approval or denial of a report or plan. An applicant may revise or supplement a report or plan deemed incomplete and resubmit it without paying an additional review fee. The applicant shall pay a plan review fee as specified in Table XIII for resubmittal of a plan which has been previously denied or withdrawn after having been determined to be complete. The department may waive any plan review fee if it determines that the total review time is not likely to exceed 4 hours.

(3) A facility must have a separate license for each hazardous waste management activity it conducts. Final licenses and variances must be renewed annually.

(4) A plan modification, as referred to in Table XIII, is a submittal which proposes to modify a license, variance, or plan previously approved by the department.

(5) Applicants submitting a closure plan with a feasibility and plan of operation report may not be required to pay the closure plan review fee.

(6) The owner or operator shall pay a construction inspection fee as required by s. NR 680.09.

(7) The owner or operator of the facility shall pay a total of ~~$5000~~ $6,000 (commercial facility) or $1200 (non-commercial facility) plan review fee for each phase of the corrective action program. The phases are facility investigation; selection of alternatives; and remedial design and operation.

(8) Facilities which clean close are not required to obtain a closure and long-term care license. This is a one-time only fee to cover the entire 30-year long-term care period. All facilities subject to this requirement must pay this one-time fee even if they previously obtained a long-term care license.

(9) This is a one-time only payment to cover the interim license period until a final determination on the issuance of an operating license is made by the Department.

(10) A commercial facility has the definition in s. NR 600.03(40).

(11) A non-commercial facility has the definition in s. NR 600.03(172).

SECTION 199. NR 680 Appendix I is amended by adding sections B.7., G.5., H.6. and 7., J.7. and 8., and L.

NR 680 Appendix I

B. General Facility Standards

7. Construction quality assurance plan

a. Changes that the CQA officer certifies in the operating record will provide equivalent or better certainty that the unit components will meet the design specifications . . . . . 1

b. Other changes . . . . . 2

Note: When a permit modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change shall be reviewed under the same procedures as the permit modification.

G.5. Replacement of a tank with a tank that meets the same design standards provided the facility's permitted tank capacity is not increased, and the replacement tank meets the same conditions in the license. . . . . 1

H. Surface Impoundments

6. Modifications of unconstructed units to comply with ss. NR 655.07(2) and 660.18(11)(f) to (i) and (31)(c) . . . . . *1

7. Changes in response action plan:

a. Increase in action leakage rate . . . . . 3

b. Change in a specific response reducing its frequency or effectiveness . . . . . 3

c. Other changes . . . . . 2

J. Landfills and Unenclosed Waste Piles

7. Modifications of unconstructed units to comply with ss. NR 655.05(2), 655.07, 655.08(3) and 660.18(11)(a) to (d) and (f) to (i) . . . . . *1

8. Changes in response action plan:

a. Increase in action leakage rate . . . . . 3

b. Change in a specific response reducing its frequency or effectiveness . . . . . 3

c. Other changes . . . . . 2

L. Corrective Action

1. Approval of a corrective action management unit pursuant to s. NR 636.40 . . . . . 2
2. Approval of a temporary unit or time extension for a temporary unit pursuant to s. NR 636.41 . . . . . 2
3. Approval to terminate the implementation of corrective action based on the results of the facility investigation . . . . . 2
4. Modification to specify the approved corrective measures . . . . . 2
5. Approval to terminate the implementation of corrective action based on the satisfaction of all applicable conditions and requirements . . . . . 2

6. Other plan modifications related to implementation of corrective action not covered by items 1 to 5 above . . . . . 1

SECTION 200. NR 685.04 is amended to read:

NR 685.04 TERMINATION OF REGULATED ACTIVITY. Any person who owns or operates a hazardous waste facility and who wishes or is required to terminate the regulated activity shall submit a closure plan for department approval and implement an approved closure plan that meets the requirements specified in s. NR 685.05, as well as the requirements of ss. NR 640.16, 645.17, 655.11 and 670.10 for storage facilities, s. NR ~~660.15~~ 660.20 or, if applicable s. NR ~~660.16~~ 660.21, for landfills and surface impoundments, s. NR 665.10 for incinerators, ss. NR 640.16, 645.17, 655.11, 665.10 and 670.10 for treatment facilities, or s. NR ~~660.19(14)~~ 660.24(14) for surface impoundments. Any person who owns or operates a disposal facility and who wishes or is required to terminate the regulated activity shall submit a long-term care plan for approval and implement an approved long-term care plan that meets the requirements specified in s. NR 685.06, as well as the requirements of s. NR ~~660.17~~ 660.22. In accordance with ss. NR 655.11 (2), ~~660.15(2)~~ 660.20(2) and ~~660.16(4)~~ 660.21(4), long-term care plans may be required for certain waste piles or surface impoundments where the department approves of in-place disposal of wastes.

SECTION 201. NR 685.05(1)(c), (d) and (f), (2)(j) and (3)(a) are amended to read:

NR 685.05(1)(c) Meets the additional closure requirements for landfills and surface impoundments as specified in s. NR ~~660.15~~ 660.20, where required for all disposal facilities, or other facilities where required under s. NR 640.16, 645.17, 655.11, 665.10 or 670.10, where the facilities have not obtained an operating license under ch. NR 680;

(d) Meets the additional closure requirements for landfills and surface impoundments as specified in s. NR ~~660.16~~ 660.21, where required for all disposal facilities or other facilities where required under s. NR 640.16, 645.17, 655.11, 665.10 or 670.10, where the facilities have obtained an operating license under ch. NR 680; and

(f) Meets, in the case of a landfill or surface impoundment as specified in s. NR ~~660.15~~ 660.20 or ~~660.16~~ 660.21, applicable requirements in ch. NR 140 and applicable soil cleanup standards in ch. NR 720 or meets the applicable closure requirements of par. (c) or (d), whichever are more stringent.

(2)(j) A description of how the applicable closure requirements in ss. NR 640.16, 645.17, 655.11, ~~660.15, 660.16~~ 660.20, 660.21, 665.10, ~~660.19(14)~~ 660.24(14) and 670.10 will be met; and

(3)(a) The owner or operator shall submit any request for modifications of a closure plan approval to the department in accordance with ss. NR 620.15 (5)(e), 680.07 and 680.42(5). The written request shall include a copy of the amended closure plan required by s. NR 680.07 for approval by the department. Requests shall be submitted at least 60 days prior

to any proposed change in facility design or operation that affects the closure plan, or no later than 60 days after an unexpected event has occurred that affects the closure plan. If an unexpected event that affects the closure plan occurs during the time a partial or final closure is being conducted, the owner or operator shall submit the request no later than 30 days after the unexpected event. Owners or operators of a surface impoundment or waste pile that do not have an approved closure plan allowing for any hazardous waste or waste contaminated materials to be disposed of in-place in accordance with s. NR 655.11(2)(b), ~~660.15(1)(d)~~ 660.20(1)(d) or ~~660.16(4)~~ 660.21(4) who may leave hazardous waste or waste contaminated materials in-place at closure shall request department approval for such action by submitting, to the department, an amendment to the closure plan no later than 60 days after the owner or operator determines the hazardous waste or hazardous waste contaminated materials will remain in-place at closure. If the determination that hazardous waste or hazardous waste contaminated materials will remain in-place at closure is made during the time a partial or final closure is being conducted, the owner or operator shall submit an amendment to the closure plan no later than 30 days from the date the determination is made.

SECTION 202. NR 685.06(5)(intro.) is amended to read:

NR 685.06(5)(intro.) The owner or operator of a hazardous waste disposal facility shall have a written long-term care plan demonstrating compliance with this subsection. In addition, certain other facilities are required, under ss. NR 600.07, 640.16, 645.17, 655.11, ~~660.17~~ 660.22, 665.10 and 670.10, to have a long-term care plan demonstrating compliance with this subsection. The long-term care plan shall be submitted to the department for approval as part of the application for an interim license under ch. NR 680. The long-term care plan shall also be submitted to the department for approval as part of the reports or plans required for an interim operating license, where specifically required under chs. NR 600 to 685. A copy of the approved long-term care plan and all revisions to the long-term care plan shall be submitted to the department upon request, including a written request by mail, and be kept at the facility until final closure is completed and certified in accordance with s. NR 685.05(10) and the long-term care period begins. After final closure has been certified, the long-term care plan shall be kept at the office or location specified in par. (b)3. This long-term care plan shall identify the activities that will be carried out after any partial or final closure of each disposal unit and the frequency of these activities and include, but not be limited to:

SECTION 203. NR 685.07(3)(a)(intro.), (b)1., (4)(a)(intro.) and (b)1., and (5)(a)2., (c), and (d) are amended to read:

NR 685.07(3)(a)(intro.) General requirements. At a minimum, closure costs shall include the cost of closing the facility in accordance with s. NR 685.05 and chs. NR 600 to 685, any necessary cover material, topsoil, seeding, fertilizing, mulching, labor and disposal or decontamination of hazardous waste and residues on equipment and structures; the cost of preparing an engineering report documenting the work performed and a 10% contingency. Closure cost estimates:

(b)1. To adjust for inflation, submitted within 60 days before the anniversary date of the establishment of proof of financial responsibility for closure under this section. For owners

or operators of disposal facilities using the net worth test under sub. (5) (f), the closure cost estimate shall be updated for inflation within 30 days after the close of the company's fiscal year and before the submittal of the annual reapplication under s. ~~144.443(5)(d)~~ 289.41(5)(d), Stats. The adjustment may be made by recalculating the maximum costs of closure in current dollars or by using an inflation factor derived from the most recent implicit price deflator for gross ~~national~~ domestic product published by the U.S. department of commerce in its Survey of Current Business, as specified in subpars. a. and b. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

(4)(a)(intro.) General requirements. At a minimum, long-term care costs shall include the costs to provide long-term care in accordance with s. NR 685.06 and chs. NR 600 to 685, land surface care; gas monitoring; leachate pumping, transportation, monitoring and treatment; groundwater monitoring, collection and analysis; maintenance of facility monitoring and waste containment devices; ~~and~~ security requirements necessary to prevent hazards to human health and a 10% contingency. Long-term care cost estimates:

(b)1. To adjust for inflation, submitted within 60 days before the anniversary date of the establishment of proof of financial responsibility for long-term care under this section. For owners or operators of disposal facilities using the net worth test under sub. (5) (f), the long-term care cost estimate shall be updated for inflation within 30 days after the close of company's fiscal year and before the submittal of the annual reapplication under s. ~~144.443(5)(d)~~ 289.41(5)(d), Stats. The adjustment may be made by recalculating the long-term care cost estimate in current dollars or by using an inflation factor derived from the most recent implicit price deflator for gross ~~national~~ domestic product published by the U.S. department of commerce in its Survey of Current Business, as specified in subd. 1.a. and b. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

(5)(a)2. Bonds shall be issued by a surety company ~~authorized to do surety business in this state~~ among those listed as acceptable sureties in Circular 570 of the U.S. department of treasury. At the option of the facility owner, a performance bond or a forfeiture bond may be filed. The department shall be the obligee of the bond. Surety companies may have the opportunity to complete the closure or long-term care of the facility in lieu of cash payment to the department if the owner or any successor in interest fails to carry out the closure or long-term care requirements of the approved plan of operation, or the applicable requirements in s. NR 685.05 or 685.06. The department shall mail notification of its intent to use the funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation or the applicable requirements in s. NR 685.05 or 685.06 have been carried out.

(c) Escrow account. If the owner establishes an escrow account, it shall be with a bank or financial institution located within the state of Wisconsin which is examined and regulated by the state or a federal agency in the amount determined according to sub. (7) (b) 1. or (c) 1. The assets in the escrow account shall consist of cash, certificates of deposit or U.S. government securities. A total of no more than $100,000 in cash and certificates of deposit may be placed into escrow accounts or trust accounts established by the owner in the same

bank or financial institution for the purposes of providing financial assurance to the department. U.S. government securities shall be used in these escrow or trust accounts for amounts in excess of $100,000. All interest or coupon payments shall be accumulated in the account. A duplicate original of the escrow agreement with original signatures shall be submitted to the department as part of an interim license submittal or an initial operating license application. The escrow account forms may be obtained from the department. The department shall be a party to the escrow agreement, which shall provide that there may be no withdrawals from the escrow account except as authorized in writing by the department. The escrow agreement shall further provide that the department shall have the right to withdraw and use part or all of the funds in the escrow account to carry out the closure or long-term care requirements of the approved plan of operation or the applicable requirements in s. NR 685.05 or 685.06 if the owner fails to do so. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation or the applicable requirements in s. NR 685.05 or 685.06 have been carried out.

(d) Irrevocable trust. If the owner creates an irrevocable trust, it shall be exclusively for the purpose of ensuring that the owner or any successor in interest shall comply with the closure or long-term care requirements of the approved plan of operation, or if no approved plan of operation exists for the facility, the applicable requirements in s. NR 685.05 or 685.06. The trust agreement shall designate the department as sole beneficiary. The trustee shall be a bank or other financial institution located within the state of Wisconsin, which has the authority to act as a trustee and whose trust operations are regulated and examined by the state or by a federal agency. The trust corpus shall consist of cash, certificates of deposit or U.S. government securities in the amount determined according to sub. (7)(b) 1. or (c) 1. A total of no more than $100,000 in cash and certificates of deposit may be placed into escrow accounts or trust accounts established by the owner in the same bank or financial institution for the purposes of providing financial assurance to the department. U.S. government securities shall be used in these escrow or trust accounts for amounts in excess of $100,000. All interest or coupon payments shall be accumulated in the account. A duplicate original of the trust agreement with original signatures shall be submitted to the department for approval as part of an interim license submittal or an initial operating license application. The trust forms may be obtained from the department. The trust agreement shall provide that there may be no withdrawals from the trust fund except as authorized by the department. The trust agreement shall further provide that sufficient monies shall be paid from the trust fund to the beneficiary in the event that the owner or any successor in interest fails to complete the closure or long-term care requirements of the approved plan of operation, or if no approved plan of operation exists for the facility, the applicable requirements in s. NR 685.05 or 685.06. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation or the applicable requirements in s. NR 685.05 or 685.06 have been carried out.

SECTION 204. NR 685.07(5)(g)2. is repealed and recreated to read:

NR 685.08(5)(g)2. Except for captive insurance companies, the insurer shall be licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states. The department, after conferring with the Wisconsin insurance commissioner, shall determine the acceptability of a surplus lines or captive insurance company to provide coverage for proof of financial responsibility. The department shall ask the insurance commissioner to provide a financial analysis of the insurer including a recommendation as to the insurer's ability to provide the required coverage. The department shall be the beneficiary of the insurance policy. The department may require a periodic review of the acceptability of a surplus lines or captive insurance company.

SECTION 205. NR 685.07(5)(g)3. is amended to read:

NR 685.07(5)(g)3. The insurance policy shall provide that, as long as any obligation of the owner for closure or long-term care remains, the insurance policy may not be cancelled by the insurer, unless a replacement insurance policy or other proof of financial responsibility under this section is provided to the department by the owner. If the insurer proposes to cancel the insurance policy, the insurer shall provide notice to the department in writing by registered or certified mail not less than 120 days prior to the proposed cancellation date. Not less than 30 days prior to the expiration of the 120-day notice period, the owner shall deliver to the department a replacement insurance policy or other proof of financial responsibility under this section, in the absence of which all storage, treatment or disposal operations shall immediately cease and the policy shall remain in effect as long as any obligation of the owner remains for closure or long-term care.

SECTION 206. NR 685.07(5)(h) to (i) are renumbered (i) to (j).

SECTION 207. NR 685.07(5)(h) is created to read:

NR 685.07(5)(h) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this section by establishing more than one proof of financial responsibility mechanism per facility. These mechanisms are limited to performance or forfeiture bonds, deposits with the department, escrow accounts, irrevocable trust funds, letters of credit, and insurance. The mechanisms shall be as specified in pars. (a) through (e), and (g), respectively, except that it is the combination of mechanisms, rather than the single mechanism, which shall provide proof of financial responsibility for an amount at least equal to the current closure or long-term care cost estimate. The department may use any or all of the mechanisms to provide for closure or long-term care of the facility.

SECTION 208. NR 685.07(7)(title) and (a) to (c) are repealed and recreated to read:

NR 685.07(7) CALCULATING THE AMOUNT OF THE PROOF OF FINANCIAL RESPONSIBILITY. (a) General. The owner shall, as part of the interim license submittal or an initial operating license application, calculate the necessary amounts of proof of financial responsibility for both closure and long-term care based on the chosen methods of providing proof of financial responsibility. The inflation factor used in the formulas shall be the result of dividing the latest published annual gross domestic product implicit price deflator published in the Survey of Current Business by the bureau of economic analysis, U.S. department of commerce, by the deflator for the previous year.

(b) Closure. 1. For escrow, trust or department accounts, proof of financial responsibility for closure shall be equal to the estimated cost of closure in current dollars multiplied by the inflation factor, and divided by the quantity of one plus the weighted average annual rate of return of the investments in the account expressed as a decimal.

2. For bonds, letters of credit and insurance, proof of financial responsibility for closure shall be equal to the estimated cost of closure in current dollars multiplied by the inflation factor.

(c) Long-term care. 1. For escrow, trust or department accounts, proof of financial responsibility for long-term care shall be provided in accordance with the following:

a. Annual payments shall be made into the account at the beginning of each year of site life. All estimated annual expenditures during the long-term care period shall be assumed to occur at the end of each year of the proof period.

b. Annual payments shall be made in equal dollar amounts or in dollar amounts that increase each year by no more than the projected rate of inflation. However, payments in excess of these minimum amounts may be made in any year, thereby reducing the amounts of subsequent annual payments for the remainder of the site life.

c. The amount of the annual payments shall be calculated and made such that, at the end of the projected facility life, the minimum dollar value of the account is equal to the sum of all estimated long-term care expenditures for the entire long-term care proof of financial responsibility period where the expenditure for each year has first been expressed in future dollars and then brought to present value using a discount rate equal to the projected rate of inflation plus 2%.

d. In estimating future earnings on these accounts, the weighted average rate of return of the investments held in the account may be used for a period of time not to exceed the weighted average maturity of the investments held in the account rounded to the nearest whole year. Earnings for years beyond the weighted average maturity of the investments in the account shall be calculated based on a projected rate of return equal to the projected rate of inflation plus 2%.

e. If an annual payment is missed or made late, the subsequent annual payment shall be increased so that the end of year balances calculated based on beginning of year payments are maintained.

2. For bonds, letters of credit or insurance, proof of financial responsibility for long-term care shall be equal to the sum of the costs in current dollars of performing each of the years of long-term care for the required long-term care proof of financial responsibility period.

SECTION 209. NR 685.07(9) is amended to read:

NR 685.07(9) AUTHORIZATION TO RELEASE FUNDS. (a) Closure. When an owner or operator has completed final or partial closure, the owner may apply to the department for release of a bond or letter of credit or return of money held on deposit, in escrow, or in trust for closure of the facility. The application shall consist of the certification and other submittals required under s. NR ~~685.05(9)~~ 685.05(10) and an itemized list of costs incurred. Upon determination by the department that complete closure has been accomplished, the department shall in writing authorize release and return of all funds accumulated in the accounts or give written permission for cancellation of a bond, letter of credit or insurance. Determinations shall be made within 60 days of the application.

(b) Long-term care. One year after final or partial closure, and annually thereafter for the period of owner responsibility, the owner, who has carried out all necessary long-term care during the preceding year, may make application to the department for reimbursement from an escrow account, trust account, deposit with the department, or other approved methods, or for reduction of the bond, insurance or letter of credit equal to the estimated costs for long-term care for that year. The application shall be accompanied by an itemized list of costs incurred. Upon determination that the expenditures incurred are in accordance with the long-term care requirements anticipated in the approved plan of operation or, if no approved plan of operation exists, are in accordance with the requirements in s. NR 685.06, the department may authorize in writing the release of the funds or approve a reduction in the bond or letter of credit. Prior to authorizing a release of the funds or a reduction of the bond or letter of credit, the department shall determine that adequate funds exist to complete required long-term care work for the remaining period of owner responsibility. The department may authorize the release of any funds remaining in an escrow account, trust account, or on deposit with the department at the termination of the period of owner responsibility to the owner based on a determination made on a final application for reimbursement. The final application shall consist of the certification required under s. NR ~~685.06(11)~~ 685.06(9) and an itemized list of costs incurred. Determinations shall be made within 60 days of any application for reimbursement under this paragraph.

SECTION 210. NR 685.08(3)(a), (7)(a) and (b), (8)(d)1., (9)(c) and (10)(f) are amended to read:

NR 685.08(3)(a) The owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph. Each insurance policy shall be amended by attachment of a hazardous waste facility liability endorsement or evidenced by a certificate of liability insurance. The wording of an endorsement shall be identical to the wording specified in sub. (7). The wording of a certificate of insurance shall

be identical to the wording specified in sub. (7). ~~At a minimum, the agent or broker shall be licensed as a surplus lines insurance agent or broker. The department shall determine the acceptability of a surplus lines insurance company to provide coverage for both sudden and nonsudden accidental occurrences. The department shall base the determination on any evaluations prepared, in accordance with s. 618.41(6)(d), Stats., by the office of the commissioner of insurance.~~ Except for captive insurance companies, the insurer shall be licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states. The department, after conferring with the Wisconsin insurance commissioner, shall determine the acceptability of a surplus lines or captive insurance company to provide coverage for both sudden and non sudden accidental occurrences. The department shall ask the insurance commissioner to provide a financial analysis of the insurer including a recommendation as to the insurer's ability to provide the required coverage. The department may require a periodic review of the acceptability of a surplus lines or captive insurance company.

(7)(a) A hazardous waste facility liability endorsement as required in sub. (3) shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Hazardous Waste Facility Liability Endorsement

This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under s. NR 685.08, Wis. Adm. Code. The coverage applies at [list EPA Identification Number, name and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences" or "sudden and nonsudden accidental occurrences", if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the insurer's liability], exclusive of legal defense costs.

The insurance afforded with respect to the occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with the provisions of this endorsement stated below are hereby amended to conform with this endorsement.

Bankruptcy or insolvency of the insured may not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in s. NR 685.08(8), Wis. Adm. Code.

Whenever requested by the Department of Natural Resources (DNR) the Insurer agrees to furnish to the DNR a signed duplicate original of the policy and all endorsements.

Cancellation of this endorsement, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, shall be effective only upon written notice and only after the expiration of 60 days after a copy of the written notice is received by the DNR.

Any other termination of this endorsement shall be effective only upon written notice and only after the expiration of thirty (30) days after a copy of the written notice is received by the DNR.

Attached to and forming part of policy No. _____ issued by [name of Insurer], herein called the Insurer, of [address of Insurer] to [name of insured] of [address] this _____ day of _____, 19__. The effective date of said policy is _____ day of _____, 19__.

I hereby certify that the wording of this endorsement is identical to the wording specified in s. NR 685.08 (7), Wis. Adm. Code, as was constituted on the date first above written, and that the ~~agent or broker~~ insurer is licensed ~~as a~~ to transact the business of insurance in Wisconsin, or eligible to provide insurance as an excess or surplus lines ~~insurance agent or broker~~ insurer in Wisconsin.

[Signature of Authorized Representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of insurer]

[Address of Representative]

(b) A certificate of liability insurance as required in sub. (3) shall be worded as follows, except that the instruction in brackets are to be replaced with the relevant information and the brackets deleted:

Hazardous Waste Facility Certificate of Liability Insurance

[Name of Insurer], (the "Insurer"), of [address of Insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the "insured"), of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under s. NR 685.08, Wis. Adm. Code. The coverage applies at [list EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences" or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence and "annual aggregate" limits of

the Insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number _____, issued on [date]. The effective date of the policy is [date].

The Insurer further certifies the following with respect to the insurance described above:

Bankruptcy or insolvency of the insured may not relieve the Insurer of its obligations under the policy.

The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any payment made by the Insurer. This provision does not apply with respect to that amount any deductible for which coverage is demonstrated as specified in s. NR 685.08(8), Wis. Adm. Code.

Whenever requested by the Department of Natural Resources (DNR) the Insurer agrees to furnish to the DNR a signed duplicate original of the policy and all endorsements.

Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, shall be effective only upon written notice and only after the expiration of 60 days after a copy of the written notice is received by the DNR.

Any other termination of the insurance shall be effective only upon written notice and only after the expiration of thirty (30) days after a copy of the written notice is received by the DNR.

I hereby certify that the wording of this instrument is identical to the wording specified in s. NR 685.08 (7), Wis. Adm. Code, as the regulation was constituted on the date first above written, and that the ~~agent or broker~~ insurer is licensed ~~as a~~ to transact the business of insurance in Wisconsin, or eligible to provide insurance as an excess or surplus lines ~~insurance agent or broker~~ insurer in Wisconsin.

[Signature of Authorized Representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer]

[Address of Representative]

(8)(d)1. A letter signed by the owner or operator's chief financial officer as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

[Address to the department]

I am the chief financial officer of [owner or operator's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage ~~[insert "and closure or long-term care", if applicable]~~ as specified in s. NR 685.08 (8), Wis. Adm. Code.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name and address.]

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in s. NR 685.08, Wis. Adm. Code: _____.

The firm identified above guarantees, through the guarantee specified in s. NR 685.08, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following:_____ _____. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee: _____; or (3) engaged in the following substantial business relationship with the owner or operator: _____, and receiving the following value in consideration of this guarantee: _____.] [Attach a written description of the business relationship or a copy of the contract establishing the relationship to this letter.]

This owner or operator [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this owner or operator ends on [month, day]. The figures for the following items marked with an asterisk are derived from this owner or operator's independently audited, year-end financial statements for the latest completed fiscal year ended [date].

**Liability Coverage for Accidental Occurrences**

[Fill in Alternative I if the criteria of s. NR 685.08 (8) (a), Wis. Adm. Code are used. Fill in Alternative II if the criteria of s. NR 685.08 (8) (b), Wis. Adm. Code are used].

ALTERNATIVE I

1. Amount of annual aggregate liability coverage to be demonstrated $

*2. Current assets $

*3. Current liabilities $

4. Net working capital (line 2 minus line 3) $

*5. Tangible net worth $

*6. If less than 90% of assets are located in the U.S., give total U.S. assets $

YES NO

7. Is line 5 at least $10 million?

8. Is line 4 at least 6 times line 1?

9. Is line 5 at least 6 times line 1?

*10. Are at least 90% of assets located in the U.S.? If not, complete line 11.

11. Is line 6 at least 6 times line 1?

ALTERNATIVE II

1. Amount of annual aggregate liability coverage to be demonstrated $

2. Current bond rating of most recent issuance and name of rating service

3. Date of issuance of bond

4. Date of maturity of bond

*5. Tangible net worth $

*6. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.)

$

YES NO

7. Is line 5 at least $10 million?

8. Is line 5 at least 6 times line 1?

*9. Are at least 90% of assets located in the U.S.?

If not, complete line 10.

10. Is line 6 at least 6 times line 1?

I hereby certify that the wording of this letter is identical to the wording specified in Section NR 685.08(8)(d)1., Wis. Adm. Code, as the regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

(9)(c) A guarantee, as specified in this subsection, shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Guarantee for Liability Coverage

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the State of ___" and insert name of state; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the state of the principal place of business], herein referred to as guarantor. This guarantee is made on behalf of our subsidiary [owner or operator] of [business address], to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in s. NR 685.08 (9).

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each state.] This guarantee satisfies third-party liability requirements for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences as specified in s. NR 685.08, Wis. Adm. Code in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from injury or damage, the guarantor shall satisfy the judgment(s), award(s) or settlement agreement(s) up to the limits of coverage identified above.

4. The obligation does not apply to any of the following:

a. Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.

b. Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

c. Bodily injury to:

1) An employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or

2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert owner or operator]. This exclusion applies:

a) Whether [insert owner or operator] may be liable as an employer or in any other capacity; and

b) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs 1) and 2).

d. Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

e. Property damage to:

1) Any property owned, rented, or occupied by [insert owner or operator];

2) Premises that are sold, given away or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;

3) Property loaned to [insert owner or operator];

4) Personal property in the care, custody or control of [insert owner or operator];

5) That particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the department and to [owner or operator] that he intends to provide alternate liability coverage as specified in s. NR 685.08, Wis. Adm. Code, as applicable, in the name of [owner or operator]. Within 120 days after the end of the fiscal

year, the guarantor shall establish the liability coverage unless [owner or operator] has done so.

6. The guarantor agrees to notify the department by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by the department of a determination that guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as a guarantor, the guarantor shall establish alternate liability coverage as specified in s. NR 685.08, Wis. Adm. Code in the name of [owner or operator], unless [owner or operator] has done so.

8. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by s. NR 685.08, Wis. Adm. Code, if the modification shall become effective only if the department does not disapprove the modification within 30 days of receipt of notification of the modification.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] shall comply with the applicable requirements of s. NR 685.08, Wis. Adm. Code for the above-listed facility(ies), except as provided in paragraph 10 of this agreement.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the Department and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the Department approves, alternate liability coverage complying with s. NR 685.08 Wis. Adm. Code.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator]:

Guarantor may terminate this guarantee 120 days following receipt of notification, through certified mail, by the Department and by [the owner or operator].

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert Principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[_____].

[Signatures]

Principal

(Notary) Date

[Signatures]

Claimant(s)

(Notary) Date

(b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee shall be considered [insert "primary" or "excess"] coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in s. NR 685.08(9)(c), Wis. Adm. Code, as the regulations were constituted on the date shown immediately below.

Effective date:

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness of notary:

(10)(f) A letter of credit, as specified in this subsection, shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

Name and Address of Issuing Institution

Secretary

Wisconsin Department of Natural Resources

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in the favor of ["any and all third-party liability claimants" or insert name of trustee of the standby trust fund], at the request and for the account of [owner's or operator's name and address] for third-party liability awards or settlements up to [in words] U.S. dollars $_____ per occurrence and the annual aggregate amount of [in words] U.S. dollars $_____, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] U.S. dollars $_____ per occurrence, and the annual aggregate amount of [in words] U.S. dollars $_____, for nonsudden accidental occurrences available upon presentation of a sight draft, bearing reference to this letter of credit No._____, and [insert the following language if the letter of credit is being used without a standby trust fund]

(A) a signed certificate reading as follows:

Certification of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operations of [principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ]. We hereby certify that the claim does not apply to any of the following:

(1) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(2) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(3) Bodily injury to:

(a) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(b) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal].

This exclusion applies:

1. Whether [insert principal] may be liable as an employer or in any other capacity; and

2. To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (a) and (b).

(4) Bodily injury or property damage arising out of the ownership, maintenance, use or entrustment to others of any aircraft, motor vehicle or watercraft.

(5) Property damage to:

(a) Any property owned, rented or occupied by [insert principal];

(b) Premises that are sold, given away or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(c) Property loaned to [insert principal];

(d) Personal property in the care, custody or control of [insert principal];

(e) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures]

Principal

[Signatures]

Claimant(s)

or

(B) a valid final court order establishing a judgment against the principal for bodily injury or property damage caused by a sudden or nonsudden accidental occurrence arising from the operation of the principal's facility or group of facilities.

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but the expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify you, the Wisconsin Department of Natural Resources, and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor the draft upon presentation to us.

[Insert the following language if a standby trust fund is not being used.] In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered [insert "primary" or "excess"] coverage.

We certify that the wording of this letter of credit is identical to the wording specified in s. NR 685.08(10)(d), Wis. Adm. Code, as the regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce" or "the Uniform Commercial Code"].

SECTION 211. Chapter NR 690 is created to read:

Chapter NR 690

STANDARDS FOR UNIVERSAL WASTE MANAGEMENT

Subchapter I - General

NR 690.01 Purpose
NR 690.02 Applicability
NR 690.03 Definitions
NR 690.04 Scope.
NR 690.05 Applicability -- batteries.
NR 690.06 Applicability -- pesticides.
NR 690.07 Applicability -- thermostats.
NR 690.08 Applicability -- household and conditionally exempt small quantity generator waste.

Subchapter II -- Standards for Small Quantity Handlers of Universal Waste.

NR 690.10 Applicability.
NR 690.11 Prohibitions.
NR 690.12 Notification.
NR 690.13 Waste management.
NR 690.14 Labeling and marking.
NR 690.15 Accumulation time limits.
NR 690.16 Employee training.
NR 690.17 Response to releases.
NR 690.18 Off-site shipments.
NR 690.19 Tracking universal waste shipments.

## Subchapter I -- General

NR 690.01 PURPOSE. The purpose of this chapter is to provide streamlined hazardous waste management regulations governing the collection and management of certain widely generated wastes, known as universal wastes. This chapter is intended to facilitate the environmentally sound collection and increase the proper recycling or treatment of these wastes, by removing impediments to collection and recycling campaigns for these wastes created by the regulation of them as hazardous wastes. By easing the regulatory burden this chapter is intended to facilitate programs developed to reduce the quantity of these wastes

going to municipal solid waste landfills or combustors. It will also assure that the wastes subject to this system will go to appropriate treatment or recycling facilities pursuant to the full hazardous waste regulatory controls.

NR 690.02 APPLICABILITY. This chapter applies to universal waste handlers and universal waste transporters handling the wastes listed in this section.

(a) Batteries as described in s. NR 690.05.

(b) Pesticides as described in s. NR 690.06.

(c) Thermostats as described in s. NR 690.07.

Note: This chapter does not apply to household waste which is excluded from regulation as hazardous waste by s. NR 605.05(1)(a).

NR 690.03 DEFINITIONS. In this chapter:

Note: In addition to the definitions in this section, the definitions in s. NR 600.03 apply to this chapter.

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

(2) "Destination facility" means a facility that treats, disposes of or recycles a particular category of universal waste. A facility at which a particular category of universal waste is only accumulated is not a destination facility for purposes of managing that category of universal waste.

Note: For purposes of this subsection, "treats, disposes of or recycles" does not include the management activities described in ss. NR 690.13(1) and (3) and 690.33(1) and (3).

(3) "FIFRA" means the Federal Insecticide, Fungicide, and Rodenticide Act, 7 USC 136 to 136y.

(4) "Generator" means any person, by generation site, whose act or process produces a hazardous waste identified or listed in ch. NR 605 or whose act first causes a hazardous waste to become subject to regulation under chs. NR 600 to 690.

(5) "Large quantity handler of universal waste" means a universal waste handler who accumulates 5,000 kilograms or more total of universal waste, calculated collectively, at any time.

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

(7) "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest or intended for use as a plant regulator, defoliant or desiccant, other than any article that is any of the following:

(a) A new animal drug under 21 USC 321(w).

(b) An animal drug that has been determined by regulation of the secretary of the U.S. department of health and human services not to be a new animal drug.

(c) An animal feed under 21 USC 321(x) that bears or contains any substances described by pars. (a) or (b).

(8) "Small quantity handler of universal waste" means a universal waste handler who does not accumulate as much as 5,000 kilograms total of universal waste, including batteries, pesticides or thermostats, calculated collectively, at any time.

(9) "Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices.

Note: Sections NR 690.13(3)(b) and 690.33(3)(b) specify requirements for the removal of mercury-containing ampules from thermometers.

(10) "Universal waste" means any of the following hazardous wastes that are subject to the universal waste requirements of this chapter:

(a) Batteries as described in s. NR 690.05.

(b) Pesticides as described in s. NR 690.06.

(c) Thermostats as described in s. NR 690.07.

(11) "Universal waste handler" means a generator of universal waste or the owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility or to a foreign destination. Universal waste handler does not mean a person who treats, disposes of or recycles universal waste; or a person engaged in the off-site transportation of universal waste by air, rail, highway or water, including a universal waste transfer facility.

Note: For purposes of this subsection, "treats, disposes of or recycles universal waste" does not include the management activities described in ss. NR 690.13(1) and (3) and 690.33(1) and (3).

(12) "Universal waste transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for 10 days or less.

(13) "Universal waste transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway or water.

NR 690.04 SCOPE. (1) This chapter establishes requirements for managing all of the following:

(a) Batteries as described in s. NR 690.05.

(b) Pesticides as described in s. NR 690.06.

(c) Thermostats as described in s. NR 690.07.

(2) This chapter provides an alternative set of management standards in lieu of regulation under chs. NR 600 to 685.

NR 690.05 APPLICABILITY - BATTERIES. (1) BATTERIES COVERED UNDER THIS CHAPTER. (a) The requirements of this chapter apply to persons managing batteries, as described in s. NR 690.03, except those listed in sub. (2).

(b) Spent lead-acid batteries which are not managed under s. NR 625.12 are subject to management under this chapter.

(2) BATTERIES NOT COVERED UNDER THIS CHAPTER. The requirements of this chapter do not apply to persons managing the following batteries:

(a) Spent lead-acid batteries that are managed under s. NR 625.12.

(b) Batteries that are not yet wastes under ch. NR 605, including those that do not meet the criteria for waste generation in sub. (3).

(c) Batteries that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in s. NR 605.08.

(3) GENERATION OF WASTE BATTERIES. (a) A used battery becomes a waste on the date it is discarded.

Note: A battery is considered to have been discarded when it is sent for reclamation.

(b) An unused battery becomes a waste on the date the handler decides to discard it.

NR 690.06 APPLICABILITY - PESTICIDES. (1) PESTICIDES COVERED UNDER THIS CHAPTER. The requirements of this chapter apply to persons managing pesticides meeting the following conditions, except those listed in sub. (2).

(a) Recalled pesticides that are:

1. Stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under FIFRA Section 19(b), including, but not limited to those owned by the registrant responsible for conducting the recall; or

Note: The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is found at 7 U.S.C. 136 to 136y.

2. Stocks of a suspended or cancelled pesticide or a pesticide that is not in compliance with FIFRA, that are part of a voluntary recall by the registrant.

(b) Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

(2) PESTICIDES NOT COVERED UNDER THIS CHAPTER. This chapter does not apply to persons managing the following pesticides:

(a) Recalled pesticides described in sub. (1)(a) and unused pesticide products described in sub. (1)(b) that are managed by farmers in compliance with s. NR 610.04(2) and (3).

Note: Section NR 610.04(2) and (3) addresses pesticides disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label, providing the container is triple rinsed in accordance with s. NR 605.06(5).

(b) Pesticides not meeting the conditions in sub. (1). These pesticides shall be managed in compliance with the hazardous waste regulations in chs. NR 600 to 685.

(c) Pesticides that are not wastes under ch. NR 605, including those that do not meet the criteria for waste generation in sub. (3) or those that are not wastes as described in sub. (4).

(d) Pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in s. NR 605.09, or if it exhibits one or more of the characteristics identified in s. NR 605.08.

Note: Certain waste pesticides generated by home or residential use may be exempt from regulation under s. NR 605.05(1)(b). Refer to that section for additional information.

(3) WHEN A PESTICIDE BECOMES A WASTE. (a) A recalled pesticide described in sub. (1)(a) becomes a waste on the first date on which both of the following conditions apply:

1. The generator of the recalled pesticide agrees to participate in the recall.

2. The person conducting the recall decides to discard the pesticide.

Note: An example of deciding to discard the pesticide would include burning the pesticide for energy recovery.

(b) An unused pesticide product described in sub. (1)(b) becomes a waste on the date the generator decides to discard it.

(4) PESTICIDES THAT ARE NOT WASTES. The following pesticides are not wastes:

(a) Recalled pesticides described in sub. (1)(a), provided that the person conducting the recall:

1. Has not made a decision to discard the pesticide. Until a decision to discard the pesticide is made, the pesticide does not meet the definition of "solid waste" under s. NR 600.03 and thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including this chapter. This pesticide remains subject to the requirements of FIFRA.

2. Has made a decision to use a management option that does not cause the pesticide to meet the definition of "solid waste" under s. NR 600.03. Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to the hazardous waste requirements, including this chapter. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of FIFRA.

Note: Examples of management options that do not cause the pesticide to meet the definition of "solid waste" are use, other than use constituting disposal, reuse, other than burning for energy recovery, and reclamation.

(b) Unused pesticide products described in sub. (1)(b), if the generator of the unused pesticide product has not decided to discard them. These pesticides remain subject to the requirements of FIFRA.

NR 690.07 APPLICABILITY - MERCURY THERMOSTATS. (1) THERMOSTATS COVERED UNDER CH. NR 690. The requirements of this chapter apply to persons managing thermostats except those listed in sub. (2).

(2) THERMOSTATS NOT COVERED UNDER CH. NR 690. The requirements of this chapter do not apply to persons managing the following thermostats:

(a) Thermostats that are not yet wastes under ch. NR 605. Subsection (3) describes when thermostats become wastes.

(b) Thermostats that are not hazardous waste. A thermostat is a hazardous waste if it exhibits one or more of the characteristics identified in s. NR 605.08.

(3) GENERATION OF WASTE THERMOSTATS. (a) A used thermostat becomes a waste on the date it is discarded.

Note: A used thermostat is considered to be discarded when it is sent for reclamation.

(b) An unused thermostat becomes a waste on the date the handler decides to discard it.

NR 690.08 APPLICABILITY -- HOUSEHOLD AND VERY SMALL QUANTITY GENERATOR WASTE. (1) Persons managing the wastes described in this section may, at their option, manage them under the requirements of this chapter:

(a) Household wastes that are exempt under s. NR 605.05(1)(a) and are also of the same type as the universal wastes defined at s. NR 690.03.

(b) Very small quantity generator wastes that are exempt from full regulation under s. NR 610.07 and are also of the same type as the universal wastes defined at NR 690.03.

(2) Persons who commingle the wastes described in sub. (1)(a) and (b) together with universal waste regulated under this chapter shall manage the commingled waste under the requirements of this chapter.

## Subchapter II

## Standards for Small Quantity Handlers of Universal Waste

NR 690.10 APPLICABILITY. This subchapter applies to small quantity handlers of universal waste.

NR 690.11 PROHIBITIONS. A small quantity handler of universal waste is prohibited from doing either of the following:

(1) Disposing of universal waste.

(2) Diluting or treating universal waste, except by responding to releases as provided in s. NR 690.17, or by managing specific wastes as provided in s. NR 690.13.

NR 690.12 NOTIFICATION. (1) Except as provided in s. NR 690.32(1)(a) and (b), a handler of universal waste shall send written notification of universal waste management to the department, and receive an EPA identification number, before meeting or exceeding the 5,000 kilogram storage limit.

(2) Except as provided in sub. (1), a small quantity handler of universal waste is not required to notify the department of universal waste handling activities.

NR 690.13 WASTE MANAGEMENT. (1) UNIVERSAL WASTE BATTERIES. A small quantity handler of universal waste shall manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(a) A small quantity handler of universal waste shall contain any universal waste battery that shows evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the battery, and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(b) A small quantity handler of universal waste may conduct any of the activities listed in this paragraph as long as the casing of each individual battery cell is not breached and remains intact and closed, except that cells may be opened to remove electrolyte but shall be immediately closed after removal:

1. Sort batteries by type.

2. Mix battery types in one container.

3. Discharge batteries so as to remove the electric charge.

4. Regenerate used batteries.

5. Disassemble batteries or battery packs into individual batteries or cells.

6. Remove batteries from consumer products.

7. Remove electrolyte from batteries.

(b) A small quantity handler of universal waste who removes electrolyte from batteries or who generates other solid waste, such as battery pack materials or discarded consumer products, as a result of the activities listed in par. (a), shall determine whether the electrolyte or other solid waste exhibit a characteristic of hazardous waste identified in s. NR 605.08.

1. If the electrolyte or other solid waste exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of chs. NR 600 to 685. The handler is considered the generator of the hazardous electrolyte or other waste and is subject to chs. NR 610 and 615.

2. If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(2) UNIVERSAL WASTE PESTICIDES. A small quantity handler of universal waste shall manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides shall be contained in one or more of the following:

1. A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

2. A container that does not meet the requirements of subd. 1., provided that the unacceptable container is overpacked in a container that does meet the requirements of subd. 1.

3. A tank that meets the requirements of ch. NR 645, except for ss. NR 645.17(1)(a)3.

4. A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(3) UNIVERSAL WASTE THERMOSTATS. A small quantity handler of universal waste shall manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(a) A small quantity handler of universal waste shall contain any universal waste thermostat that shows evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the thermostat, and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(b) A small quantity handler of universal waste may remove mercury-containing ampules from universal waste thermostats provided the handler does all of the following:

1. Removes the ampules in a manner designed to prevent breakage of the ampules.

2. Removes ampules only over or in a containment device, such as a tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage.

3. Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of ss. NR 610.08(1)(o) and 615.05(4).

4. Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of ss. NR 610.08(1)(o) and 615.05(4).

5. Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury.

6. Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers.

7. Stores removed ampules in closed, non-leaking containers that are in good condition.

8. Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling and transportation.

(c)1. A small quantity handler of universal waste who removes mercury-containing ampules from thermostats shall determine whether any of the following exhibit a characteristic of hazardous waste identified in s. NR 605.08:

a. Mercury or clean-up residues resulting from spills or leaks.

b. Other solid waste generated as a result of the removal of mercury-containing ampules, such as remaining thermostat units.

2. If the mercury, residues or other solid waste exhibit a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of chs. NR 600 to 685. The handler is considered the generator of the mercury, residues or other waste and shall manage it is subject to chs. NR 610 and 615.

3. If the mercury, residues or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

NR 690.14 LABELING AND MARKING. A small quantity handler of universal waste shall label or mark the universal waste to identify the type of universal waste as specified in this section.

(1) A small quantity handler of batteries shall label or mark clearly each battery or each container in which the batteries are contained. The handler shall label or mark the batteries or containers with any one of the following phrases: "Universal Waste - Batteries," "Waste Batteries" or "Used Batteries."

(2) A container or multiple container package unit, tank, transport vehicle or vessel in which recalled universal waste pesticides as described in s. NR 690.06(1)(a) are contained shall be labeled or marked clearly with both of the following:

1. The label that was on or accompanied the product as sold or distributed.

2. The words "Universal Waste - Pesticides" or "Waste - Pesticides."

(3) A container, tank or transport vehicle or vessel in which unused pesticide products as described in s. NR 690.06(1)(b) are contained shall be labeled or marked clearly with one of the following using the words "Universal Waste - Pesticides" or "Waste - Pesticides":

(a) The label that was on the product when purchased, if still legible.

(b) If using the labels described in par. (a) is not feasible, the appropriate label as required under U.S. department of transportation regulations found at 49 CFR part 172.

(c) If using the labels described in pars. (a) and (b) is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by a state.

(4) A small quantity handler of thermostats shall label or mark clearly each thermostat or each container in which the thermostats are contained. The handler shall label or mark the thermostats or containers with any one of the following phrases: "Universal Waste - Mercury Thermostats," "Waste Mercury Thermostats" or "Used Mercury Thermostats".

NR 690.15 ACCUMULATION TIME LIMITS. (1) A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated or received from another handler, unless the requirements of sub. (2) are met.

(2) A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment or disposal.

(3) A small quantity handler of universal waste who accumulates universal waste shall be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by doing any one of the following:

(a) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received.

(b) Marking or labeling each battery, thermostat or other individual item of universal waste with the date it became a waste or was received.

(c) Maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received.

(d) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received.

(e) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received.

(f) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

NR 690.16 EMPLOYEE TRAINING. A small quantity handler of universal waste shall inform all employees who handle or have responsibility for managing universal waste. The information shall describe proper handling and emergency procedures appropriate to the type or types of universal waste handled at the facility.

NR 690.17 RESPONSE TO RELEASES. (1) A small quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.

(2) A small quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, shall manage the hazardous waste in compliance with all applicable requirements of chs. NR 600 to 685. The handler is considered the generator of the material resulting from the release, and shall manage it in compliance with chs. NR 610 and 615.

NR 690.18 OFF-SITE SHIPMENTS. (1) A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility or a foreign destination.

(2) If a small quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and shall comply with the transporter requirements of subchapter IV while transporting the universal waste.

(3) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR parts 171 to 180, a small quantity handler of universal waste shall package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable U.S. department of transportation regulations found at 49 CFR parts 172 to 180.

(4) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.

(5) If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall do one of the following:

(a) Receive the waste back when notified that the shipment has been rejected.

(b) Agree with the receiving handler on a destination facility to which the shipment will be sent.

(6) A small quantity handler of universal waste may reject a shipment containing universal waste or a portion of a shipment containing universal waste that he has received

from another handler. If a handler rejects a shipment or a portion of a shipment, he shall contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler shall do one of the following:

(a) Send the shipment back to the originating handler.

(b) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

(7) If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the department of the illegal shipment, and provide the name, address and phone number of the originating shipper. The department will provide instructions for managing the hazardous waste.

(8) If a small quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

NR 690.19 TRACKING UNIVERSAL WASTE SHIPMENTS. A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

NR 690.20 EXPORTS. A small quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in s. NR 615.14(1) shall do all of the following:

Note: A small quantity handler of universal waste who sends universal waste to those OECD countries specified in s. NR 615.14(1) is subject to the requirements of 40 CFR part 262, subpart H.

(1) Comply with the requirements applicable to a primary exporter in s. NR 615.12.

(2) Export the universal waste only upon consent of the receiving country and in conformance with the EPA acknowledgement of consent.

(3) Provide a copy of the EPA acknowledgement of consent for the shipment to the transporter transporting the shipment for export.

## Subchapter III

## Standards for Large Quantity Handlers of Universal Waste

NR 690.30 APPLICABILITY. This subchapter applies to large quantity handlers of universal waste. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which 5,000 kilograms or more total of universal waste is accumulated.

Note: A handler of universal waste is required to send written notification of universal waste management to the department, and received an EPA identification number, before meeting or exceeding the 5,000 kilogram storage limit. Please see s. NR 690.12(1).

NR 690.31 PROHIBITIONS. A large quantity handler of universal waste is prohibited from doing either of the following:

(1) Disposing of universal waste.

(2) Diluting or treating universal waste, except by responding to releases as provided in s. NR 690.37; or by managing specific wastes as provided in s. NR 690.33.

NR 690.32 NOTIFICATION. (1)(a) A large quantity handler of universal waste who has already notified the department of its hazardous waste management activities and has received an EPA identification number is not required to renotify under this section.

(b) A large quantity handler of universal waste who manages recalled universal waste pesticides as described in s. NR 690.06(1)(a) and who has sent notification to the department as required by 40 CFR part 165 is not required to notify for those recalled universal waste pesticides under this section.

(2) This notification shall include all of the following:

(a) The universal waste handler's name and mailing address.

(b) The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities.

(c) The address or physical location of the universal waste management activities.

(d) A list of all of the types of universal waste managed by the handler, such as batteries, pesticides and thermostats.

(e) A statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time and the types of universal waste, such as batteries, pesticides, thermostats, the handler is accumulating above this quantity.

NR 690.33 WASTE MANAGEMENT. (1) UNIVERSAL WASTE BATTERIES. A large quantity handler of universal waste shall manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment.

(a) A large quantity handler of universal waste shall contain any universal waste battery that shows evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the battery, and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(b) A large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed, except that cells may be opened to remove electrolyte but shall be immediately closed after removal:

1. Sorting batteries by type.

2. Mixing battery types in one container.

3. Discharging batteries so as to remove the electric charge.

4. Regenerating used batteries.

5. Disassembling batteries or battery packs into individual batteries or cells.

6. Removing batteries from consumer products.

7. Removing electrolyte from batteries.

(c) A large quantity handler of universal waste who removes electrolyte from batteries or who generates other solid waste, such as battery pack materials or discarded consumer products, as a result of the activities in par. (b), shall determine whether the electrolyte or other solid waste exhibits a characteristic of hazardous waste identified in s. NR 605.08.

1. If the electrolyte or other solid waste exhibits a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of chs. NR 600 to 685. The handler is considered the generator of the hazardous electrolyte or other waste and is subject to chs. NR 610 and 615.

2. If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(2) UNIVERSAL WASTE PESTICIDES. A large quantity handler of universal waste shall manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides shall be contained in one or more of the following:

(a) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(b) A container that does not meet the requirements of par. (a), provided that the unacceptable container is overpacked in a container that does meet the requirements of par. (a).

(c) A tank that meets the requirements of ch. NR 645, except for ss. NR 645.15 and 645.17(1)(a)3.

(d) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(3) UNIVERSAL WASTE THERMOSTATS. A large quantity handler of universal waste shall manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment.

(a) A large quantity handler of universal waste shall contain any universal waste thermostat that shows evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the thermostat, and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(b) A large quantity handler of universal waste may remove mercury-containing ampules from universal waste thermostats provided the handler does each of the following:

1. Removes the ampules in a manner designed to prevent breakage of the ampules.

2. Removes ampules only over or in a containment device, such as a tray or pan sufficient to contain any mercury released from an ampule in case of breakage.

3. Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of ss. NR 610.08(1)(o) and 615.05(4).

4. Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of ss. NR 610.08(1)(o) and 615.05(4).

5. Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury.

6. Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers.

7. Stores removed ampules in closed, non-leaking containers that are in good condition.

8. Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling and transportation.

(c)1. A large quantity handler of universal waste who removes mercury-containing ampules from thermostats shall determine whether either of the following exhibit a characteristic of hazardous waste identified in s. NR 605.08:

a. Mercury or clean-up residues resulting from spills or leaks.

b. Other solid waste generated as a result of the removal of mercury-containing ampules, such as remaining thermostat units.

2. If the mercury, residues or other solid waste exhibit a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of chs. NR 600 to 685. The handler is considered the generator of the mercury, residues or other waste and is subject to chs. NR 610 and 615.

3. If the mercury, residues or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

NR 690.34 LABELING AND MARKING. A large quantity handler of universal waste shall label or mark the universal waste to identify the type of universal waste.

(1) A large quantity handler of batteries or a container or tank in which the batteries are contained shall label or mark clearly each battery or container or tank in which the batteries are contained. The handler shall label or mark the batteries, containers or tanks with any one of the following phrases: "Universal Waste - Batteries," "Waste Batteries" or "Used Batteries."

(2) A container or multiple container package unit, tank, transport vehicle or vessel in which recalled universal waste pesticides as described in s. NR 690.06(1)(a) are contained shall be labeled or marked clearly with both of the following:

(a) The label that was on or accompanied the product as sold or distributed.

(b) The words "Universal Waste - Pesticides" or "Waste - Pesticides."

(3) A container, tank or transport vehicle or vessel in which unused pesticide products as described in s. NR 690.06(1)(b) are contained shall be labeled or marked clearly with both of the following:

(a) A label meeting one of the following descriptions:

1. The label that was on the product when purchased, if still legible.

2. If using the labels described in subd. 1. is not feasible, the appropriate label as required under the U.S. department of transportation regulations found at 49 CFR part 172.

3. If using the labels described in subds. 1. and 2. is not feasible, another label prescribed or designated by the pesticide collection program.

(b) The words "Universal Waste - Pesticides" or "Waste - Pesticides."

(4) A large quantity handler of thermostats or a container or tank in which the thermostats are contained shall label or mark clearly each thermostat or container or tank in which the thermostats are contained. The handler shall label or mark the thermostats or containers with any one of the following phrases: "Universal Waste - Mercury Thermostats," "Waste Mercury Thermostats" or "Used Mercury Thermostats".

NR 690.35 ACCUMULATION TIME LIMITS. (1) A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated or received from another handler, unless the requirements of sub. (2) are met.

(2) A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated or received from another handler, if the activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment or disposal. However, the handler bears the burden of proving that the activity was solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment or disposal.

(3) A large quantity handler of universal waste shall be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:

(a) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received.

(b) Marking or labeling the individual item of universal waste, such as each battery or thermostat, with the date it became a waste or was received.

(c) Maintaining an inventory system on-site that identifies the date the universal waste being accumulated became a waste or was received.

(d) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received.

(e) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received.

(f) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

NR 690.36 EMPLOYEE TRAINING. A large quantity handler of universal waste shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

NR 690.37 RESPONSE TO RELEASES. (1) A large quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.

(2) A large quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, shall manage the hazardous waste in compliance with all applicable requirements of chs. NR 600 to 685. The handler is considered the generator of the material resulting from the release, and is subject to chs. NR 610 and 615.

NR 690.38 OFF-SITE SHIPMENTS. (1) A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility or a foreign destination.

(2) If a large quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and shall comply with the transporter requirements of subch. IV while transporting the universal waste.

(3) If a universal waste being offered for off-site transportation meets the definition of hazardous materials found at 49 CFR parts 171 to 180, a large quantity handler of universal waste shall package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable U.S. department of transportation regulations found at 49 CFR parts 172 to 180.

(4) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.

(5) If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall do one of the following:

(a) Receive the waste back when notified that the shipment has been rejected.

(b) Agree with the receiving handler on a destination facility to which the shipment will be sent.

(6) A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that the handler has received from another handler. If a handler rejects a shipment or a portion of a shipment, the handler shall contact the originating handler to notify the originating handler of the rejection and to discuss reshipment of the load. The handler shall do one of the following:

(a) Send the shipment back to the originating handler.

(b) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

(7) If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the department of the illegal shipment and provide the name, address and phone number of the originating shipper. The department will provide instructions for managing the hazardous waste.

(8) If a large quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

NR 690.39 TRACKING UNIVERSAL WASTE SHIPMENTS. (1) RECEIPT OF SHIPMENTS. A large quantity handler of universal waste shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste received shall include all of the following information:

(a) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent.

(b) The quantity of each type of universal waste received.

Note: The phrase "type of universal waste" refers to batteries, pesticides, thermostats or other type of waste if this chapter is amended to apply to other wastes.

(c) The date of receipt of the shipment of universal waste.

(2) SHIPMENTS OFF-SITE. A large quantity handler of universal waste shall keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste sent shall include all of the following information:

(a) The name and address of the universal waste handler, destination facility or foreign destination to whom the universal waste was sent.

(b) The quantity of each type of universal waste sent.

(c) The date the shipment of universal waste left the facility.

(3) RECORDS RETENTION. (a) A large quantity handler of universal waste shall retain the records described in sub. (1) for at least 3 years from the date of receipt of a shipment of universal waste.

(b) A large quantity handler of universal waste shall retain the records described in sub. (2) for at least 3 years from the date a shipment of universal waste left the facility.

NR 690.40 EXPORTS. A large quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in s. NR 615.14(1) shall do all of the following:

Note: A large quantity handler of universal waste who sends universal waste to those OECD countries specified in s. NR 615.14(1) is subject to the requirements of 40 CFR part 262, subpart H.

(1) Comply with the requirements applicable to a primary exporter in s. NR 615.12.

(2) Export such universal waste only upon consent of the receiving country and in conformance with the EPA acknowledgement of consent.

(3) Provide a copy of the EPA acknowledgement of consent for the shipment to the transporter transporting the shipment for export.

Subchapter IV

Standards for Universal Waste Transporters

NR 690.50 APPLICABILITY. This subchapter applies to universal waste transporters.

NR 690.51 PROHIBITIONS. A universal waste transporter is prohibited from doing either of the following:

(1) Disposing of universal waste.

(2) Diluting or treating universal waste, except by responding to releases as provided in s. NR 690.54.

NR 690.52 WASTE MANAGEMENT. (1) A universal waste transporter shall comply with all applicable U.S. department of transportation regulations in 49 CFR part 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the department of transportation regulations, a material is considered a hazardous waste if it is subject to the hazardous waste manifest requirements of the U.S. environmental protection agency specified in 40 CFR part 262. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the U.S. department of transportation regulations.

(2) Some universal waste materials are regulated by the department of transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under 40 CFR 262, they may not be described by the DOT proper shipping name "hazardous waste, (l) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".

NR 690.53 STORAGE TIME LIMITS. (1) A universal waste transporter may not store universal waste at a universal waste transfer facility for more than 10 days.

(2) If a universal waste transporter stores universal waste for more than 10 days, the transporter becomes a universal waste handler and shall comply with subch. II or III while storing the universal waste.

NR 690.54 RESPONSE TO RELEASES. (1) A universal waste transporter shall immediately contain all releases of universal wastes and other residues from universal wastes.

(2) A universal waste transporter shall determine whether any material resulting from the release is hazardous waste, and if so, it is subject to chs. NR 600 to 685. If the waste is determined to be a hazardous waste, the transporter is subject to chs. NR 610 and 615.

NR 690.55 OFF-SITE SHIPMENTS. (1) A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility or a foreign destination.

(2) If the universal waste being shipped off-site meets the U.S. department of transportation's definition of hazardous materials under 49 CFR 171.8, the shipment shall be properly described on a shipping paper in accordance with the applicable department of transportation regulations under 49 CFR part 172.

NR 690.56 EXPORTS. A universal waste transporter transporting a shipment of universal waste to a foreign destination other than to those OECD countries specified in s. NR 615.14(1) may not accept a shipment if the transporter knows the shipment does not conform to the EPA acknowledgment of consent. In addition, the transporter shall ensure that both of the following occur:

Note: A transporter who transports universal waste to those OECD countries specified in s. NR 615.14(1) is subject to the requirements of 40 CFR part 262, subpart H.

(1) A copy of the EPA acknowledgment of consent accompanies the shipment.

(2) The shipment is delivered to the facility designated by the person initiating the shipment.

## Subchapter V

## Standards for Destination Facilities

NR 690.60 APPLICABILITY. (1) The owner or operator of a destination facility is subject to chs. NR 600 to 685.

(2) The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled shall comply with s. NR 625.04(4).

NR 690.61 OFF-SITE SHIPMENTS. (1) The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility or foreign destination.

(2) The owner or operator of a destination facility may reject a shipment containing universal waste or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, the owner or operator shall contact the shipper to notify the shipper of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility shall do one of the following:

(a) Send the shipment back to the original shipper, or

(b) If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.

(c) If the a owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility shall immediately notify the department of the illegal shipment, and provide the name, address and phone number of the shipper. The department will provide instructions for managing the hazardous waste.

(d) If the owner or operator of a destination facility receives a shipment of non-hazardous, non-universal waste, the owner or operator may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.

NR 690.62 TRACKING UNIVERSAL WASTE SHIPMENTS. (1) The owner or operator of a destination facility shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste received shall include all of the following information:

(a) The name and address of the universal waste handler, destination facility or foreign shipper from whom the universal waste was sent.

(b) The quantity of each type of universal waste received, such as batteries, pesticides or thermostats.

(c) The date of receipt of the shipment of universal waste.

(2) The owner or operator of a destination facility shall retain the records described in sub. (1) for at least 3 years from the date of receipt of a shipment of universal waste.

Subchapter VI

Import Requirements

NR 690.70 IMPORTS. Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of this chapter, immediately after the waste enters the United States, as indicated in subs. (1) to (4).

(1) A universal waste transporter is subject to the universal waste transporter requirements of subch. IV.

(2) A universal waste handler is subject to the small or large quantity handler of universal waste requirements of subch. II or III, as applicable.

(3) An owner or operator of a destination facility is subject to the destination facility requirements of subch. V.

(4) Persons managing universal waste that is imported from an OECD country as specified in s. NR 615.14(1) are subject to subs. (1) to (3), in addition to the requirements of 40 CFR part 262, subpart H.

Subchapter VII

Petitions to Include Other Wastes under ch. NR 690

NR 690.80 GENERAL. (1) Any person seeking to add a hazardous waste or a category of hazardous waste to this chapter may petition for a regulatory amendment under this subchapter and s. 227.12(2)(b), Stats.

(2) To be successful, the petitioner shall demonstrate to the satisfaction of the department that regulation under the universal waste regulations of this chapter is appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition shall include the information required by s. 227.12(2)(b), Stats. The petition shall also address as many of the factors listed in s. NR 690.81 as are appropriate for the waste or waste category addressed in the petition.

(3) The department will evaluate petitions using the factors listed in s. NR 690.81. The department shall grant or deny a petition using the factors listed in s. NR 690.81. The decision will be based on the weight of evidence showing that regulation under ch. NR 690 is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

NR 690.81 FACTORS FOR PETITIONS TO INCLUDE OTHER WASTES UNDER CH. NR 690. Factors for petitions to include other wastes under ch. NR 690 include the following:

(1) The waste or category of waste, as generated by a wide variety of generators, is listed in s. NR 605.09, or, if not listed, a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in s. NR 605.08.

Note: When a characteristic waste is added to the universal waste regulations of ch. NR 690 by using a generic name to identify the waste category, such as batteries, the definition of universal waste in ss. NR 600.03 and 690.03 will be amended to include only the hazardous waste portion of the waste category, such as hazardous waste batteries. Thus, only the portion of the waste stream that does exhibit one or more characteristics, and thus is hazardous waste, is subject to the universal waste regulations of this chapter.

(2) The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments, including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities.

(3) The waste or category of waste is generated by a large number of generators and is frequently generated in relatively small quantities by each generator.

Note: More than 1,000 nationally would be considered a large number of generators.

(4) Systems to be used for collecting the waste or category of waste, including packaging, marking, and labeling practices, would ensure close stewardship of the waste.

(5) The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner, such as waste management requirements appropriate to be added to ss. NR 690.13, 690.33, and 690.52; or applicable U.S. department of transportation requirements, or both, would be protective of human health and the environment during accumulation and transport.

(6) Regulation of the waste or category of waste under this chapter will increase the likelihood that the waste will be diverted from non-hazardous waste management systems, including the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems, to recycling, treatment or disposal in compliance with chs. NR 600 to 685.

(7) Regulation of the waste or category of waste under this chapter will improve implementation of and compliance with the hazardous waste regulatory program.

(8) Such other factors as may be appropriate.

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on October 22, 1997.

The rules shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin December 3, 1997

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By George E. Meyer
George E. Meyer, Secretary

SEAL