Chapter NR 666

STANDARDS FOR MANAGING SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

Subchapter C — Recyclable Materials Used in a Manner Constituting Disposal

Note: This subchapter is similar to federal regulations contained in 40 CFR part 266 subpart C, as revised on July 24, 2002

NR 666.020 Applicability. (1) This subchapter applies to recyclable materials that are applied to or placed on the land in one of the following ways:

(a) Without mixing with any other substance.

(b) After mixing or combination with any other substance or substances. These materials will be referred to throughout this subchapter as "materials used in a manner that constitutes disposal".

(2) Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently regulated if the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means and if the products meet the applicable treatment standards in subch. D of ch. NR 668 (or applicable prohibition levels in s. NR 668.32, where no treatment standards have been established) for each recyclable material (i.e., hazardous waste) that they contain.

(3) Anti–skid and deicing uses of slags, which are generated from high temperature metals recovery (HTMR) processing of hazardous waste K061, K062 and F006, in a manner constituting disposal are not covered by the exemption in sub. (2) and remain regulated.

(4) Fertilizers that contain recyclable materials are not regulated if any of the following apply:

(a) They are zinc fertilizers excluded from the definition of solid waste according to s. NR 661.04 (1) (u).

(b) They meet the applicable treatment standards in subch. D of ch. NR 668 for each hazardous waste that they contain.

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NR 666.021 Standards applicable to generators and transporters of materials used in a manner that constitutes disposal. Generators and transporters of materials that

are used in a manner that constitutes disposal are subject to the applicable requirements of chs. NR 662 and 663, and the notification requirement under s. NR 660.07.

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NR 666.022 Standards applicable to storers of materials that are to be used in a manner that constitutes disposal who are not the ultimate users. Owners or operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable provisions of subchs. A to L of chs. NR 664 and 665, ch. NR 670 and the notification requirement under s. NR 660.07.

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NR 666.023 Standards applicable to users of materials that are used in a manner that constitutes disposal. **(1)** Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of subchs. A to N of chs. NR 664 and 665, and chs. NR 668 and 670 and the notification requirement under s. NR 660.07. (These requirements do not apply to products which contain these recyclable materials under the provisions of s. NR 666.020 (2).)

(2) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited.

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Subchapter F — Recyclable Materials Used for Precious Metal Recovery

NR 666.070 Applicability and requirements. **(1)** This subchapter applies to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium or any combination of these.

(2) Persons who generate, transport or store recyclable materials that are regulated under this subchapter are subject to all of the following requirements:

(a) Notification requirements under s. NR 660.07.

(b) Subchapter B of ch. NR 662 for generators, ss. NR 663.20 and 663.21 for transporters and ss. NR 665.0071 and 665.0072 for persons who store.

(c) For precious metals exported to or imported from designated OECD member countries for recovery, persons who generate, transport or store recyclable materials are subject to subch. H of ch. NR 662 and s. NR 665.0012 (1) (b). For precious metals exported to or imported from non–OECD countries for recovery, persons who generate, transport or store recyclable materials are subject to subchs. E and F of ch. NR 662.

(3) Persons who store recycled materials that are regulated under this subchapter shall keep all of the following records to document that they are not accumulating these materials speculatively (as defined in s. NR 661.01 (3)):

(a) Records showing the volume of these materials stored at the beginning of the calendar year.

(b) The amount of these materials generated or received during the calendar year.

(c) The amount of materials remaining at the end of the calendar year.

(4) Recyclable materials that are regulated under this subchapter that are accumulated speculatively (as defined in s. NR 661.01 (3)) are subject to all applicable provisions of chs. NR 662 to 665 and 670.

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

Subchapter G — Spent Lead–Acid Batteries Being Reclaimed

NR 666.080 Applicability and requirements. **(1)** Are spent lead–acid batteries exempt from hazardous waste management requirements? If you generate, collect, transport, store or regenerate lead–acid batteries for reclamation purposes, you may be exempt from certain hazardous waste management requirements. Use the following table to determine which requirements apply to you. Alternatively, you may choose to manage your spent lead–acid batteries under the "Universal Waste" rule in ch. NR 673.

Note: In addition to the requirements of this subchapter or ch. NR 673, s. 287.18, Stats., applies to persons who sell lead acid batteries.

If your batteries * * *	And if you * * *	Then you * * *	And you * * *
(a) Will be reclaimed through regeneration (such as by electrolyte replacement).		are exempt from chs. NR 662 (except for s. NR 662.11), 663, 664, 665, 666, 668 and 670, and the notification requirements at s. NR 660.07.	are subject to ch. NR 661 and s. NR 662.11.
(b) Will be reclaimed other than through regeneration.	generate, collect or transport these batteries.	are exempt from chs. NR 662 (except for s. NR 662.11), 663, 664, 665, 666 and 670, and the notification requirements at s. NR 660.07.	are subject to ch. NR 661, s. NR 662.11 and applicable provisions under ch. NR 668.
(c) Will be reclaimed other than through regeneration.	store these batteries but you aren't the reclaimer.	are exempt from chs. NR 662 (except for s. NR 662.11), 663, 664, 665, 666 and 670, and the notification requirements at s. NR 660.07.	are subject to ch. NR 661, s. NR 662.11 and applicable provisions under ch. NR 668.
(d) Will be reclaimed other than through regeneration.	store these batteries before you reclaim them.	shall comply with sub. (2).	are subject to ch. NR 661, s. NR 662.11 and applicable provisions under ch. NR 668.
(e) Will be reclaimed other than through regeneration.	don't store these batteries before you reclaim them.	are exempt from chs. NR 662 (except for s. NR 662.11), 663, 664, 665, 666 and 670, and the notification requirements at s. NR 660.07.	are subject to ch. NR 661, s. NR 662.11 and applicable provisions under ch. NR 668.

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Subchapter H — Hazardous Waste Burned in Boilers and Industrial Furnaces

Note: This subchapter is similar to federal regulations contained in 40 CFR part 266 subpart H, revised as of July 1, 2003.

NR 666.100 Applicability. (1) The regulations of this subchapter apply to hazardous waste burned or processed in a boiler or industrial furnace (as defined in s. NR 660.10) irrespective of the purpose of burning or processing, except as provided by subs. (2), (3), (4), (7) and (8). In this subchapter, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of ss. NR 666.104, 666.105, 666.106 and 666.107 apply to facilities operating under an interim license or under a license as specified in ss. NR 666.102 and 666.103.

(2) (a) Except as provided by par. (b), the standards of this subchapter no longer apply when an affected source demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR part 63, subpart EEE, by conducting a comprehensive performance test and submitting to the department a notification of compliance under 40 CFR 63.1207(j) and 63.1210(b) documenting compliance with 40 CFR part 63, subpart EEE. Nevertheless, even after this demonstration of compliance with the MACT standards, hazardous waste license conditions that were based on the standards of this chapter shall continue to be in effect until the conditions are removed from the license or the license is terminated or revoked, unless the license expressly provides otherwise.

(b) The following standards all continue to apply:

1. If you elect to comply with s. NR 670.235 (1) (a) 1. to minimize emissions of toxic compounds from startup, shutdown and malfunction events, s. NR 666.102 (5) (a) requiring operations in accordance with the operating requirements specified in the license at all times that hazardous waste is in the unit, and s. NR 666.102 (5) (b) 3. requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes. These provisions apply only during startup, shutdown and malfunction events.

2. The closure requirements of ss. NR 666.102 (5) (k) and 666.103 (12).

3. The standards for direct transfer of s. NR 666.111.

4. The standards for regulation of residues of s. NR 666.112.

5. The applicable requirements of subchs. A to H, BB and CC of chs. NR 664 and 665.

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

(a) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in subch. C of ch. NR 661. Such used oil is subject to regulation under ch. NR 679.

(b) Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery.

(c) Hazardous wastes that are exempt from regulation under ss. NR 661.04 and 661.06 (1) (c) 3. and 4., and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under s. NR 662.220.

(d) Coke ovens, if the only hazardous waste burned is EPA hazardous waste number K087, decanter tank tar sludge from coking operations.

(4) Owners and operators of smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters and foundry furnaces, but not including cement kilns, aggregate kilns or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under this subchapter, except for ss. NR 666.101 and 666.112.

(a) To be exempt from ss. NR 666.102 to 666.111, an owner or operator of a metal recovery furnace or mercury recovery furnace shall comply with all of the following requirements, except that an owner or operator of a lead or a nickel–chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, shall comply with par. (c), and owners or operators of lead recovery furnaces that are subject to regulation under the Secondary Lead Smelting national emission standards for hazardous air pollutants (NESHAP) shall comply with sub. (8).

1. Provide a one–time written notice to the department indicating all of the following:

a. The owner or operator claims exemption under this subsection.

b. The hazardous waste is burned solely for metal recovery consistent with par. (b).

c. The hazardous waste contains recoverable levels of metals.

d. The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this subsection.

2. Sample and analyze the hazardous waste and other feedstocks as necessary to comply with this subsection under procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW–846, incorporated by reference in s. NR 660.11, or alternative methods that meet or exceed the SW–846 method performance capabilities. If SW–846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method.

3. Maintain at the facility for at least 3 years records to document compliance with this subsection including limits on levels of toxic organic constituents and Btu value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.

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

1. The hazardous waste has a total concentration of organic compounds listed in ch. NR 661, Appendix VIII, exceeding 500 ppm by weight, as–fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as–generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted shall be retained in the records required by par.(a)3.

2. The hazardous waste has a heating value of 5,000 Btu/lb or more, as–fired, and so is considered to be burned as fuel. The heating value of a waste as–generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly diluted shall be retained in the records required by par. (a) 3.

(c) To be exempt from ss. NR 666.102 to 666.111, an owner or operator of a lead or nickel–chromium or mercury recovery furnace (except for owners or operators of lead recovery furnaces subject to regulation under the Secondary Lead Smelting national emission standards for hazardous air pollutants (NESHAP)) or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, shall provide a one–time written notice to the department identifying each hazardous waste burned and specifying whether the owner or operator claims an exemption for each waste under this paragraph or par. (a). The owner or operator shall comply with par. (a) for those wastes claimed to be exempt under par. (a) and shall comply with the requirements below for those wastes claimed to be exempt under this paragraph.

1. The hazardous wastes listed in Appendices XI, XII and XIII, and baghouse bags used to capture metallic dusts emitted by

steel manufacturing, are exempt from par. (a), if all of the following conditions are met:

a. A waste listed in Appendix IX shall contain recoverable levels of lead, a waste listed in Appendix XII shall contain recoverable levels of nickel or chromium, a waste listed in Appendix XIII shall contain recoverable levels of mercury and contain less than 500 ppm of ch. NR 661, Appendix VIII organic constituents, and baghouse bags used to capture metallic dusts emitted by steel manufacturing shall contain recoverable levels of metal.

b. The waste does not exhibit the toxicity characteristic of s. NR 661.24 for an organic constituent.

c. The waste is not a hazardous waste listed in subch. D of ch. NR 661 because it is listed for an organic constituent as identified in ch. NR 661, Appendix VII.

d. The owner or operator certifies in the one−time notice that hazardous waste is burned under this paragraph and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to par. (a) 2. and records to document compliance with this paragraph shall be kept for at least 3 years.

2. The department may decide on a case−by−case basis that the toxic organic constituents in a material listed in Appendix XI, XII or XIII that contains a total concentration of more than 500 ppm toxic organic compounds listed in ch. NR 661, Appendix VIII may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from this subchapter. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace shall become subject to this subchapter when burning that material. In making the hazard determination, the department will consider all of the following factors:

a. The concentration and toxicity of organic constituents in the material.

b. The level of destruction of toxic organic constituents provided by the furnace.

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

(5) The standards for direct transfer operations under s. NR 666.111 apply only to facilities subject to the license standards of s. NR 666.102 or the interim license standards of s. NR 666.103.

(6) The management standards for residues under s. NR 666.112 apply to any boiler or industrial furnace burning hazardous waste.

(7) Owners and operators of smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, iridium, osmium, rhodium or ruthenium, or any combination of these are conditionally exempt from regulation under this subchapter, except for s. NR 666.112. To be exempt from ss. NR 666.101 to 666.111, an owner or operator shall do all of the following:

(a) Provide a one−time written notice to the department indicating all of the following:

1. The owner or operator claims exemption under this subsection.

2. The hazardous waste is burned for legitimate recovery of precious metal.

3. The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this subsection.

(b) Sample and analyze the hazardous waste as necessary to document that the waste is burned for recovery of economically significant amounts of precious metal using procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW−846, incorporated by reference in s. NR 660.11 or alternative methods that meet or exceed the SW−846 method performance capabilities. If SW−846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method.

(c) Maintain at the facility for at least 3 years records to document that all hazardous wastes burned are burned for recovery of economically significant amounts of precious metal.

(8) Starting June 23, 1997, owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the Secondary Lead Smelting national standards for hazardous air pollutants (NESHAP), are conditionally exempt from regulation under this subchapter, except for s. NR 666.101. To be exempt, an owner or operator shall provide a one−time notice to the department identifying each hazardous waste burned and specifying that the owner or operator claims an exemption under this subsection. The notice also shall state that the waste burned has a total concentration of non−metal compounds listed in ch. NR 661, Appendix VIII, of less than 500 ppm by weight, as fired and as provided in sub. (4) (b) 1., or is listed in Appendix XI.

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NR 666.101 Management prior to burning. (1) GENERATORS. Generators of hazardous waste that is burned in a boiler or industrial furnace are subject to ch. NR 662 .

(2) TRANSPORTERS. Transporters of hazardous waste that is burned in a boiler or industrial furnace are subject to ch. NR 663.

(3) STORAGE AND TREATMENT FACILITIES. (a) Owners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of chs. NR 664, 665 and 670, except as provided by sub. (3) (b). These standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.

(b) Owners and operators of facilities that burn, in an onsite boiler or industrial furnace exempt from regulation under the small quantity burner provisions of s. NR 666.108, hazardous waste that they generate are exempt from the regulations of chs. NR 664, 665 and 670 applicable to storage units for those storage units that store mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in par. (a).

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NR 666.102 License standards for burners. (1) APPLICABILITY. (a) *General.* Owners and operators of boilers and industrial furnaces burning hazardous waste and not operating under an interim license shall comply with this section and ss. NR 670.022 and 670.066, unless exempt under the small quantity burner exemption of s. NR 666.108.

(b) *Applicability of ch. NR 664 standards.* Owners and operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions of ch. NR 664, except as provided otherwise by this subchapter:

1. In subch. A of ch. NR 664 (General), s. NR 664.0004.

2. In subch. B of ch. NR 664 (General facility standards), s. NR 664.0011 to 664.0018.

3. In subch. C of ch. NR 664 (Preparedness and prevention), ss. NR 664.0031 to 664.0037.

4. In subch. D of ch. NR 664 (Contingency plan and emergency procedures), ss. NR 664.0051 to 664.0056.

5. In subch. E of ch. NR 664 (Manifest system, recordkeeping and reporting), the applicable provisions of ss. NR 664.0071 to 664.0077.

6. In subch. F of ch. NR 664 (Corrective Action), ss. NR 664.0090 and 664.0101.

7. In subch. G of ch. NR 664 (Closure and post−closure), ss. NR 664.0111 to 664.0115.

8. In subch. H of ch. NR 664 (Financial requirements), ss. NR 664.0141, 664.0142, 664.0143 and 664.0147 to 664.0151, except that states and the federal government are exempt from s. NR 664.0147.

9. Subchapter BB (Air emission standards for equipment leaks), except s. NR 664.1050 (1).

(2) HAZARDOUS WASTE ANALYSIS. (a) The owner or operator shall provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in ch. NR 661, Appendix VIII that may reasonably be expected to be in the waste. Such constituents shall be identified and quantified if present, at levels detectable by analytical procedures prescribed by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW−846, incorporated by reference in s. NR 660.11. Alternative methods that meet or exceed the method performance capabilities of SW−846 methods may be used. If SW−846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method. The ch. NR 661, Appendix VIII constituents excluded from this analysis shall be identified and the basis for their exclusion explained. This analysis shall be used to provide all information required by this subchapter and ss. NR 670.022 and 670.066 and to enable the department to prescribe such license conditions as necessary to protect human health and the environment. Such analysis shall be included as a portion of the feasibility and plan of operation report, or, for facilities operating under the interim license standards of this subchapter, as a portion of the trial burn plan that may be submitted before the feasibility and plan of operation report under provisions of s. NR 670.066 (7) as well as any other analysis required by the department in preparing the license. Owners and operators of boilers and industrial furnaces not operating under the interim license standards shall provide the information required by s. NR 670.022 or 670.066 (3) in the feasibility and plan of operation report to the greatest extent possible.

(b) Throughout normal operation, the owner or operator shall conduct sampling and analysis as necessary to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the license.

(3) EMISSIONS STANDARDS. Owners and operators shall comply with emissions standards provided by ss. NR 666.104 to 666.107.

(4) LICENSES. (a) The owner or operator may burn only hazardous wastes specified in the facility license and only under the operating conditions specified under sub. (5), except in approved trial burns under the conditions specified in s. NR 670.066.

(b) Hazardous wastes not specified in the license may not be burned until operating conditions have been specified under a new license or license modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with feasibility and plan of operation report under s. NR 670.022.

(c) Boilers and industrial furnaces operating under the interim license standards of s. NR 666.103 are permitted under procedures provided by s. NR 670.066 (7).

(d) A license for a new boiler or industrial furnace (those boilers and industrial furnaces not operating under the interim license standards) shall establish appropriate conditions for each of the applicable requirements of this section, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet sub. (5), in order to comply with all of the following standards:

1. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a point of operational readiness to conduct a trial burn, not to exceed a duration of 720 hours operating time when burning hazardous waste, the operating requirements shall be those most likely to ensure compliance with the emission standards of ss. NR 666.104 to 666.107, based on the department's engineering judgment. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation shall include those specified by the applicable provisions of s. NR 666.104, 666.105, 666.106 or 666.107. The department may extend the duration of this period for up to 720 additional hours when good cause for the extension is demonstrated by the applicant.

2. For the duration of the trial burn, the operating requirements shall be sufficient to demonstrate compliance with the emissions standards of ss. NR 666.104 to 666.107 and shall be in accordance with the approved trial burn plan.

3. For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, submission of the trial burn results by the applicant, review of the trial burn results and modification of the facility license by the department to reflect the trial burn results, the operating requirements shall be those most likely to ensure compliance with the emission standards of ss. NR 666.104 to 666.107 based on the department's engineering judgment.

4. For the remaining duration of the license, the operating requirements shall be those demonstrated in a trial burn or by alternative data specified in s. NR 670.022, as sufficient to ensure compliance with the emissions standards of ss. NR 666.104 to 666.107.

(5) OPERATING REQUIREMENTS. (a) *General.* A boiler or industrial furnace burning hazardous waste shall be operated in accordance with the operating requirements specified in the license at all times where there is hazardous waste in the unit.

(b) *Requirements to ensure compliance with the organic emissions standards.* 1. 'DRE standard.' Operating conditions shall be specified either on a case−by−case basis for each hazardous waste burned as those demonstrated (in a trial burn or by alternative data as specified in s. NR 670.022) to be sufficient to comply with the destruction and removal efficiency (DRE) performance standard of s. NR 666.104 (1) or as those special operating requirements provided by s. NR 666.104 (1) (d) for the waiver of the DRE trial burn. When the DRE trial burn is not waived under s. NR 666.104 (1) (d), each set of operating requirements shall specify the composition of the hazardous waste (including acceptable variations in the physical and chemical properties of the hazardous waste which will not affect compliance with the DRE performance standard) to which the operating requirements apply. For each such hazardous waste, the license shall specify acceptable operating limits including, but not limited to, the following conditions as appropriate:

a. Feed rate of hazardous waste and other fuels measured and specified as prescribed in par. (f).

b. Minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in par. (f).

c. Appropriate controls of the hazardous waste firing system.

d. Allowable variation in boiler and industrial furnace system design or operating procedures.

e. Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in par. (f).

f. An appropriate indicator of combustion gas velocity, measured and specified as prescribed in par. (f), unless documentation is provided under s. NR 670.066 demonstrating adequate combustion gas residence time.

g. Such other operating requirements as are necessary to ensure that the DRE performance standard of s. NR 666.104 (1) is met.

2. 'Carbon monoxide and hydrocarbon standards.' The license shall incorporate a carbon monoxide (CO) limit and, as appropriate, a hydrocarbon (HC) limit as provided by s. NR 666.104 (2), (3), (4), (5) and (6). The license limits shall be specified as follows:

a. When complying with the CO standard of s. NR 666.104 (2) (a), the license limit is 100 ppmv.

b. When complying with the alternative CO standard under s. NR 666.104 (3), the license limit for CO is based on the trial burn and is established as the average over all valid runs of the highest hourly rolling average CO level of each run, and the license limit for HC is 20 ppmv (as defined in s. NR 666.104 (3) (a)), except as provided in s. NR 666.104 (6).

c. When complying with the alternative HC limit for industrial furnaces under s. NR 666.104 (6), the license limit for HC and CO is the baseline level when hazardous waste is not burned as specified by that subsection.

3. 'Startup and shutdown.' During startup and shutdown of the boiler or industrial furnace, hazardous waste (except waste fed solely as an ingredient under the Tier I (or adjusted Tier I) feed rate screening limits for metals and chloride or chlorine, and except low risk waste exempt from the trial burn requirements under ss. NR 666.104 (1) (e), 666.105, 666.106 and 666.107) may not be fed into the device unless the device is operating within the conditions of operation specified in the license.

(c) *Requirements to ensure conformance with the particulate standard.* 1. Except as provided in subds. 2. and 3., the license shall specify the following operating requirements to ensure conformance with the particulate standard specified in s. NR 666.105:

a. Total ash feed rate to the device from hazardous waste, other fuels and industrial furnace feedstocks, measured and specified as prescribed in par. (f).

b. Maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in par. (f).

c. Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system.

d. Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures.

e. Such other operating requirements as are necessary to ensure that the particulate standard in s. NR 666.111 (2) is met.

2. License conditions to ensure conformance with the particulate matter standard may not be provided for facilities exempt from the particulate matter standard under s. NR 666.105 (2).

3. For cement kilns and light−weight aggregate kilns, license conditions to ensure compliance with the particulate standard may not limit the ash content of hazardous waste or other feed materials.

(d) *Requirements to ensure conformance with the metals emissions standard.* 1. For conformance with the Tier I (or adjusted Tier I) metals feed rate screening limits of s. NR 666.106 (2) or (5), the license shall specify the following operating requirements:

a. Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under provisions of par. (f).

b. Total feed rate of hazardous waste measured and specified as prescribed in par. (f).

c. A sampling and metals analysis program for the hazardous waste, other fuels and industrial furnace feedstocks.

2. For conformance with the Tier II metals emission rate screening limits under s. NR 666.106 (3) and the Tier III metals controls under s. NR 666.106 (4), the license shall specify the following operating requirements:

a. Maximum emission rate for each metal specified as the average emission rate during the trial burn.

b. Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in par. (f) 1.

c. Feed rate of each metal in the following feedstreams, measured and specified as prescribed in par. (f):

1) Total feedstreams.

2) Total hazardous waste feed.

3) Total pumpable hazardous waste feed.

d. Total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in par. (f).

e. Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in par. (f).

f. Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in par. (f).

g. Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in par. (f).

h. Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system.

i. Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures.

j. Such other operating requirements as are necessary to ensure that the metals standards under s. NR 666.106 (3) or (4) are met.

3. For conformance with an alternative implementation approach approved by the department under s. NR 666.106 (6), the license shall specify all of the following operating requirements:

a. Maximum emission rate for each metal specified as the average emission rate during the trial burn.

b. Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in par. (f) 1.

c. Feed rate of each metal in the following feedstreams, measured and specified as prescribed in par. (f):

1) Total hazardous waste feed.

2) Total pumpable hazardous waste feed.

d. Total feed rate of chlorine and chloride in total feedstreams measured and specified prescribed in par. (f).

e. Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in par. (f).

f. Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in par. (f).

g. Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in par. (f).

h. Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system.

i. Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures.

j. Such other operating requirements as are necessary to ensure that the metals standards under s. NR 666.106 (3) or (4) are met.

(e) *Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards.* 1. For conformance with the Tier I total chloride and chlorine feed rate screening limits of s. NR 666.107 (2) (a), the license shall specify all of the following operating requirements:

a. Feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in par. (f).

b. Feed rate of total hazardous waste measured and specified as prescribed in par. (f).

c. A sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels and industrial furnace feedstocks.

2. For conformance with the Tier II HCl and Cl_2 emission rate screening limits under s. NR 666.107 (2) (b) and the Tier III HCl and Cl_2 controls under s. NR 666.107 (3), the license shall specify the following operating requirements:

a. Maximum emission rate for HCl and for Cl_2 specified as the average emission rate during the trial burn.

b. Feed rate of total hazardous waste measured and specified as prescribed in par. (f).

c. Total feed rate of chlorine and chloride in total feedstreams, measured and specified as prescribed in par. (f).

d. Maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in par. (f).

e. Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system.

f. Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures.

g. Such other operating requirements as are necessary to ensure that the HCl and Cl_2 standards under s. NR 666.107 (2) (b) or (3) are met.

(f) *Measuring parameters and establishing limits based on trial burn data.* 1. 'General requirements.' As specified in pars. (b) to (e), each operating parameter shall be measured, and license limits on the parameter shall be established, according to either of the following procedures:

a. A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the license limit specified as the time−weighted average during all valid runs of the trial burn.

b. 1)The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

a) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

b) An hourly rolling average is the arithmetic mean of the 60 most recent 1−minute average values recorded by the continuous monitoring system.

2) The license limit for the parameter shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average value for each run.

2. 'Rolling average limits for carcinogenic metals and lead.' Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by subd. 1. or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an average period from 2 to 24 hours:

a. The feed rate of each metal shall be limited at any time to 10 times the feed rate that would be allowed on an hourly rolling average basis.

b. The continuous monitor shall meet all of the following specifications:

1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

2) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60−minute period beginning at one minute after the beginning of preceding clock hour.

c. The license limit for the feed rate of each metal shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average feed rate for each run.

3. 'Feed rate limits for metals, total chloride and chlorine, and ash.' Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride and chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream shall be monitored under the continuous monitoring requirements of subds. 1. and 2.

4. 'Conduct of trial burn testing.' a. If compliance with all applicable emissions standards of ss. NR 666.104 to 666.107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards shall be as close as possible to the original operating conditions.

b. Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of ss. NR 666.104 to 666.107 or establishing limits on operating parameters under this section, the facility shall operate under trial burn conditions for a sufficient period to reach steady−state operations. The department may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under s. NR 666.106 (6) need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals emissions.

c. Trial burn data on the level of an operating parameter for which a limit shall be established in the license shall be obtained during emissions sampling for the pollutant or pollutants (i.e., metals, PM, HCl/Cl_2, organic compounds) for which the parameter shall be established as specified by this subsection.

(g) *General requirements.* 1. 'Fugitive emissions.' Fugitive emissions shall be controlled by one of the following:

a. Keeping the combustion zone totally sealed against fugitive emissions.

b. Maintaining the combustion zone pressure lower than atmospheric pressure.

c. An alternate means of control demonstrated (with the feasibility and plan of operation report) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

2. 'Automatic waste feed cutoff.' A boiler or industrial furnace shall be operated with a functioning system that automatically cuts off the hazardous waste feed when operating conditions deviate from those established under this section. The department may limit the number of cutoffs per an operating period on a case−by−case basis. In addition, all of the following conditions shall be met:

a. The license limit for (the indicator of) minimum combustion chamber temperature shall be maintained while hazardous

waste or hazardous waste residues remain in the combustion chamber.

b. Exhaust gases shall be ducted to the air pollution control system operated in accordance with the license requirements while hazardous waste or hazardous waste residues remain in the combustion chamber.

c. Operating parameters for which license limits are established shall continue to be monitored during the cutoff, and the hazardous waste feed may not be restarted until the levels of those parameters comply with the license limits. For parameters that may be monitored on an instantaneous basis, the department shall establish a minimum period of time after a waste feed cutoff during which the parameter may not exceed the license limit before the hazardous waste feed may be restarted.

3. 'Changes.' A boiler or industrial furnace shall cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits as specified in the license.

(h) *Monitoring and inspections.* 1. The owner or operator shall monitor and record all of the following, at a minimum, while burning hazardous waste:

a. If specified by the license, feed rates and composition of hazardous waste, other fuels and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine.

b. If specified by the license, carbon monoxide (CO), hydrocarbons (HC) and oxygen on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with operating requirements specified in par. (b) 2. CO, HC and oxygen monitors shall be installed, operated and maintained in accordance with methods specified in Appendix IX.

c. Upon the request of the department, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate), residues and exhaust emissions shall be conducted to verify that the operating requirements established in the license achieve the applicable standards of ss. NR 666.104, 666.105, 666.106 and 666.107.

2. All monitors shall record data in units corresponding to the license limit unless otherwise specified in the license.

3. The boiler or industrial furnace and associated equipment (pumps, values, pipes, fuel storage tanks, etc.) shall be subjected to thorough visual inspection when it contains hazardous waste, at least daily for leaks, spills, fugitive emissions and signs of tampering.

4. The automatic hazardous waste feed cutoff system and associated alarms shall be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the department that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, operational testing shall be conducted at least once every 30 days.

5. These monitoring and inspection data shall be recorded and the records shall be placed in the operating record required by s. NR 664.0073.

(i) *Direct transfer to the burner.* If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator shall comply with s. NR 666.111.

(j) *Recordkeeping.* The owner or operator shall keep in the operating record of the facility all information and data required by this section until closure of the facility.

(k) *Closure.* At closure, the owner or operator shall remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters and scrubber sludges) from the boiler or industrial furnace.

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

NR 666.103 Interim license standards for burners.

(1) PURPOSE, SCOPE, APPLICABILITY. (a) *General.* 1. The purpose of this section is to establish minimum national standards for owners and operators of "existing" boilers and industrial furnaces that burn hazardous waste where such standards define the acceptable management of hazardous waste during the period of interim license. The standards of this section apply to owners and operators of existing facilities until either a license is issued under s. NR 666.102 (4) or until closure responsibilities identified in this section are fulfilled.

2. "Existing" or "in existence" means a boiler or industrial furnace that on or before August 21, 1991 is either in operation burning or processing hazardous waste or for which construction (including the ancillary facilities to burn or to process the hazardous waste) has commenced. A facility has commenced construction if the owner or operator has obtained the federal, state and local approvals or licenses necessary to begin physical construction; and one of the following applies:

a. A continuous on−site, physical construction program has begun.

b. The owner or operator has entered into contractual obligations—which cannot be canceled or modified without substantial loss—for physical construction of the facility to be completed within a reasonable time.

3. If a boiler or industrial furnace is located at a facility that already has a license or interim license, then the facility shall comply with the applicable regulations dealing with license modifications in s. NR 670.042 or changes in interim license in s. NR 670.072.

(b) *Exemptions.* The requirements of this section do not apply to hazardous waste and facilities exempt under ss. NR 666.100 (2) or 666.108.

(c) *Prohibition on burning dioxin−listed wastes.* The following hazardous waste listed for dioxin and hazardous waste derived from any of these wastes may not be burned in a boiler or industrial furnace operating under an interim license: F020, F021, F022, F023, F026 and F027.

(d) *Applicability of ch. NR 665 standards.* Owners and operators of boilers and industrial furnaces that burn hazardous waste and are operating under an interim license are subject to all of the following provisions of ch. NR 665, except as provided otherwise by this section:

1. In subch. A of ch. NR 665 (General), s. NR 665.0004.

2. In subch. B of ch. NR 665 (General facility standards), ss. NR 665.0011 to 665.0017.

3. In subch. C of ch. NR 665 (Preparedness and prevention), ss. NR 665.0031 to 665.0037.

4. In subch. D of ch. NR 665 (Contingency plan and emergency procedures), ss. NR 665.0051 to 665.0056.

5. In subch. E of ch. NR 665 (Manifest system, recordkeeping and reporting), ss. NR 665.0071 to 665.0077, except that ss. NR 665.0071, 665.0072 and 665.0076 do not apply to owners and operators of on−site facilities that do not receive any hazardous waste from off−site sources.

6. In subch. G of ch. NR 665 (Closure and long−term care), ss. NR 665.0111 to 665.0115.

7. In subch. H of ch. NR 665 (Financial requirements), ss. NR 665.0141, 665.0142, 665.0143 and 665.0147 to 665.0148, except that states and the federal government are exempt from s. NR 665.0147.

8. Subchapter BB of ch. NR 665 (Air emission standards for equipment leaks), except s. NR 665.1050 (1).

(e) *Special requirements for furnaces.* The following controls apply during an interim license to industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see subd. 2.) at any location other than the hot end where products are normally discharged or where fuels are normally fired:

1. 'Controls.' a. The hazardous waste shall be fed at a location where combustion gas temperatures are at least 1800 °F.

b. The owner or operator shall determine that adequate oxygen is present in combustion gases to combust organic constituents in the waste and retain documentation of such determination in the facility record.

c. For cement kiln systems, the hazardous waste shall be fed into the kiln.

d. The hydrocarbon controls of s. NR 666.104 (3) or sub. (3) (e) apply upon certification of compliance under sub. (3) irrespective of the CO level achieved during the compliance test.

2. 'Burning hazardous waste solely as an ingredient.' A hazardous waste is burned for a purpose other than solely as an ingredient if it meets one of these criteria:

a. The hazardous waste has a total concentration of nonmetal compounds listed in ch. NR 661, Appendix VIII, exceeding 500 ppm by weight, as−fired, and so is considered to be burned for destruction. The concentration of nonmetal compounds in a waste as−generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys nonmetal constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted shall be retained in the facility record.

b. The hazardous waste has a heating value of 5,000 Btu/lb or more, as−fired, and so is considered to be burned as fuel. The heating value of a waste as−generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending to augment the heating value to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly blended shall be retained in the facility record.

(f) *Restrictions on burning hazardous waste that is not a fuel.* Prior to certification of compliance under sub. (3), owners and operators may not feed hazardous waste that has a heating value less than 5,000 Btu/lb, as−generated, (except that the heating value of a waste as−generated may be increased to above the 5,000 Btu/lb limit by bona fide treatment; however, blending to augment the heating value to meet the 5,000 Btu/lb limit is prohibited and records shall be kept to document that impermissible blending has not occurred) in a boiler or industrial furnace, except that:

1. Hazardous waste may be burned solely as an ingredient.

2. Hazardous waste may be burned for purposes of compliance testing (or testing prior to compliance testing) for a total period of time not to exceed 720 hours.

3. Such waste may be burned if the department has documentation to show that, prior to August 21, 1991, all of the following conditions were met:

a. The boiler or industrial furnace was operating under the interim license standards for incinerators provided by subch. O of ch. NR 665, or the interim license standards for thermal treatment units provided by subch. P of ch. NR 665.

b. The boiler or industrial furnace met the interim license eligibility requirements under s. NR 670.070 for subch. O or subch. P of ch. NR 665.

c. Hazardous waste with a heating value less than 5,000 Btu/lb was burned prior to that date.

4. Such waste may be burned in a halogen acid furnace if the waste was burned as an excluded ingredient under s. NR 661.02 (5) prior to February 21, 1991 and documentation is kept on file supporting this claim.

(g) *Direct transfer to the burner.* If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator shall comply with s. NR 666.111.

(2) CERTIFICATION OF PRECOMPLIANCE. (a) *General.* The owner or operator shall provide complete and accurate information specified in par. (b) to the department on or before August 21, 1991, and shall establish limits for the operating parameters specified in par. (c). Such information is termed a "certification of precompliance" and constitutes a certification that the owner or operator has determined that, when the facility is operated within the limits specified in par. (c), the owner or operator believes that, using best engineering judgment, emissions of particulate matter, metals, HCl and Cl_2 are not likely to exceed the limits provided by ss. NR 666.105, 666.106 and 666.107. The facility may burn hazardous waste only under the operating conditions that the owner or operator establishes under par. (c) until the owner or operator submits a revised certification of precompliance under par. (h) or a certification of compliance under sub.(3), or until a license is issued.

(b) *Information required.* All of the following information shall be submitted with the certification of precompliance to support the determination that the limits established for the operating parameters identified in par.(c) are not likely to result in an exceedance of the allowable emission rates for particulate matter, metals, HCl and Cl_2:

1. General facility information:

a. EPA facility ID number.

b. Facility name, contact person, telephone number and address.

c. Description of boilers and industrial furnaces burning hazardous waste, including type and capacity of device.

d. A scaled plot plan showing the entire facility and location of the boilers and industrial furnaces burning hazardous waste.

e. A description of the air pollution control system on each device burning hazardous waste, including the temperature of the flue gas at the inlet to the particulate matter control system.

2. Except for facilities complying with the Tier I or adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by ss. NR 666.106 (2) or (5) and 666.107 (2) (a) or (5), respectively, the estimated uncontrolled (at the inlet to the air pollution control system) emissions of particulate matter, each metal controlled by s. NR 666.106, and hydrogen chloride and chlorine, and all of the following information to support such determinations:

a. The feed rate (lb/hr) of ash, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks).

b. The estimated partitioning factor to the combustion gas for the materials identified in subd. 2. a. and the basis for the estimate and an estimate of the partitioning to HCl and Cl_2 of total chloride and chlorine in feed materials. To estimate the partitioning factor, the owner or operator shall use either best engineering judgment or the procedures specified in Appendix IX.

c. For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under sub. (3) (c) 2. a., the estimated enrichment factor for each metal. To estimate the enrichment factor, the owner or operator shall use either best engineering judgment or the procedures specified in "Alternative Methodology for Implementing Metals Controls" in Appendix IX.

d. If best engineering judgment is used to estimate partitioning factors or enrichment factors under subd. 2. b. or c. respectively, the basis for the judgment. When best engineering judgment is used to develop or evaluate data or information and make

determinations under this section, the determinations shall be made by a qualified, registered professional engineer and a certification of the engineer's determinations in accordance with s. NR 670.011 (4) shall be provided in the certification of precompliance.

3. For facilities complying with the Tier I or adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by ss. NR 666.106 (2) or (5) and 666.107 (2) (a) or (5), the feed rate (lb/hr) of total chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver and thallium in each feed stream (hazardous waste, other fuels, industrial furnace feedstocks).

4. For facilities complying with the Tier II or Tier III emission limits for metals or HCl and Cl_2 (under ss. NR 666.106 (3) or (4) or 666.107 (2) (b) or (3)), the estimated controlled (outlet of the air pollution control system) emissions rates of particulate matter, each metal controlled by s. NR 666.106, and HCl and Cl_2, and the following information to support such determinations:

a. The estimated air pollution control system (APCS) removal efficiency for particulate matter, HCl, Cl_2, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver and thallium.

b. To estimate APCS removal efficiency, the owner or operator shall use either best engineering judgment or the procedures prescribed in Appendix IX.

c. If best engineering judgment is used to estimate APCS removal efficiency, the basis for the judgment. Use of best engineering judgment shall be in conformance with provisions of subd. 2. d..

5. Determination of allowable emissions rates for HCl, Cl_2, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver and thallium, and the following information to support such determinations:

a. For all facilities, all of the following:

1) Physical stack height.

2) Good engineering practice stack height as defined by 40 CFR 51.100(ii).

3) Maximum flue gas flow rate.

4) Maximum flue gas temperature.

5) Attach a US geological service topographic map (or equivalent) showing the facility location and surrounding land within 5 km of the facility.

6) Identify terrain type: complex or noncomplex.

7) Identify land use: urban or rural.

b. For owners and operators using Tier III site specific dispersion modeling to determine allowable levels under s. NR 666.106 (4) or 666.107 (3), or adjusted Tier I feed rate screening limits under s. NR 666.106 (5) or 666.107 (5):

1) Dispersion model and version used.

2) Source of meterological data.

3) The dilution factor in micrograms per cubic meter per gram per second of emissions for the maximum annual average off–site (unless on–site is required) ground level concentration (MEI location).

4) Indicate the MEI location on the map required under subd. 5. a. 5).

6. For facilities complying with the Tier II or III emissions rate controls for metals or HCl and Cl_2, a comparison of the estimated controlled emissions rates determined under subd. 4. with the allowable emission rates determined under subd. 5.

7. For facilities complying with the Tier I (or adjusted Tier I) feed rate screening limits for metals or total chloride and chlorine, a comparison of actual feed rates of each metal and total chlorine and chloride determined under subd. 3. to the Tier I allowable feed rates.

8. For industrial furnaces that feed hazardous waste for any purpose other than solely as an ingredient (as defined by sub. (1) (e) 2.) at any location other than the product discharge end of the device, documentation of compliance with sub. (1) (e) 1. a., b. and c.

9. For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under sub. (3) (c) 2. a., both of the following:

a. The applicable particulate matter standard in lb/hr.

b. The precompliance limit on the concentration of each metal in collected PM.

(c) *Limits on operating conditions.* The owner and operator shall establish limits on the following parameters consistent with the determinations made under par. (b) and certify (under provisions of par. (i)) to the department that the facility will operate within the limits during interim license when there is hazardous waste in the unit until revised certification of precompliance under par. (h) or certification of compliance under sub. (3):

1. Feed rate of total hazardous waste and (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5)) pumpable hazardous waste.

2. Feed rate of each metal in all of the following feed streams:

a. Total feed streams, except that industrial furnaces that comply with the alternative metals implementation approach under par. (d) shall specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams.

b. Total hazardous waste feed, unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5).

c. Total pumpable hazardous waste feed, unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5).

3. Total feed rate of chlorine and chloride in total feed streams.

4. Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light–weight aggregate kilns is not limited.

5. Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or adjusted Tier I feed rate screening limits for chlorine under s. NR 666.107 (2) (a) or (5) and for all metals under s. NR 666.106 (2) or (5), and the uncontrolled particulate emissions do not exceed the standard under s. NR 666.105.

(d) *Operating requirements for furnaces that recycle PM.* Owners and operators of furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions controls under sub. (3) (c) 2. a. shall comply with the special operating requirements provided in "Alternative Methodology for Implementing Metals Controls" in Appendix IX.

(e) *Measurement of feed rates and production rate.* 1. 'General requirements.' Limits on each of the parameters specified in par. (c) (except for limits on metals concentrations in collected particulate matter (PM) for industrial furnaces that recycle collected PM) shall be established and continuously monitored under either of the following methods:

a. A limit for a parameter may be established and continuously monitored and recorded on an instantaneous basis (i.e., the value that occurs at any time) not to be exceeded at any time.

b. A limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the

detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

2) An hourly rolling average is the arithmetic mean of the 60 most recent 1−minute average values recorded by the continuous monitoring system.

2. 'Rolling average limits for carcinogenic metals and lead.' Feed rate limits for the carcinogenic metals (arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by subd. 1. b. or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

a. The feed rate of each metal shall be limited at any time to 10 times the feed rate that would be allowed on a hourly rolling average basis.

b. The continuous monitor shall meet all of the following specifications:

1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

2) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60−minute period beginning at one minute after the beginning of preceding clock hour.

3. 'Feed rate limits for metals, total chloride and chlorine, and ash.' Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride and chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream shall be monitored under the continuous monitoring requirements of subd. 1. and 2.

(f) *Public notice requirements at precompliance.* On or before August 21, 1991 the owner or operator shall submit a notice with the following information for publication in a major local newspaper of general circulation and send a copy of the notice to the appropriate units of state and local government. The owner and operator shall provide to the department with the certification of precompliance evidence of submitting the notice for publication. The notice, which shall be entitled "Notice of Certification of Precompliance with Hazardous Waste Burning Requirements of s. NR 666.103 (2), Wis. Adm. Code", shall include all of the following:

1. Name and address of the owner and operator of the facility as well as the location of the device burning hazardous waste.

2. Date that the certification of precompliance is submitted to the department.

3. Brief description of the regulatory process required to comply with the interim license requirements including required emissions testing to demonstrate conformance with emissions standards for organic compounds, particulate matter, metals, HCl and Cl_2.

4. Types and quantities of hazardous waste burned including, but not limited to, source, whether solids or liquids, as well as an appropriate description of the waste.

5. Type of device or devices in which the hazardous waste is burned including a physical description and maximum production rate of each device.

6. Types and quantities of other fuels and industrial furnace feedstocks fed to each unit.

7. Brief description of the basis for this certification of precompliance as specified in par. (b).

8. Locations where the record for the facility can be viewed and copied by interested parties. These records and locations shall at a minimum include both of the following:

a. The administrative record kept by the department office where the supporting documentation was submitted or another location designated by the department.

b. The BIF correspondence file kept at the facility site where the device is located. The correspondence file shall include all correspondence between the facility and the department, state and local regulatory officials, including copies of all certifications and notifications, such as the precompliance certification, precompliance public notice, notice of compliance testing, compliance test report, compliance certification, time extension requests and approvals or denials, enforcement notifications of violations, and copies of EPA and state site visit reports submitted to the owner or operator.

9. Notification of the establishment of a facility mailing list whereby interested parties may notify the department that they wish to be placed on the mailing list to receive future information and notices about this facility.

10. Location (mailing address) of the department bureau of waste management where further information can be obtained on department regulation of hazardous waste burning.

(g) *Monitoring other operating parameters.* When the monitoring systems for the operating parameters listed in sub. (3) (a) 5. to 13. are installed and operating in conformance with vendor specifications or (for CO, HC and oxygen) specifications provided by Appendix IX, as appropriate, the parameters shall be continuously monitored and records shall be maintained in the operating record.

(h) *Revised certification of precompliance.* The owner or operator may revise at any time the information and operating conditions documented under pars. (b) and (c) in the certification of precompliance by submitting a revised certification of precompliance under procedures provided by those paragraphs.

1. The public notice requirements of par. (f) do not apply to recertifications.

2. The owner and operator shall operate the facility within the limits established for the operating parameters under par. (c) until a revised certification is submitted under this paragraph or a certification of compliance is submitted under sub. (3).

(i) *Certification of precompliance statement.* The owner or operator shall include the following signed statement with the certification of precompliance submitted to the department:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with s. NR 666.103 (2) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating limits established in this certification pursuant to s. NR 666.103 (2) (c) and (d) are enforceable limits at which the facility can legally operate during interim license until: (1) A revised certification of precompliance is submitted, (2) a certification of compliance is submitted, or (3) an operating license is issued."

(3) CERTIFICATION OF COMPLIANCE. The owner or operator shall conduct emissions testing to document compliance with the emissions standards of ss. NR 666.104 (2) to (5), 666.105, 666.106, 666.107 and sub. (1) (e) 1. d., under the procedures prescribed by this subsection, except under extensions of time provided by par. (g). Based on the compliance test, the owner or operator shall submit to the department on or before August 21, 1992

a complete and accurate "certification of compliance" (under par. (d)) with those emission standards establishing limits on the operating parameters specified in par. (a).

(a) *Limits on operating conditions.* The owner or operator shall establish limits on the following parameters based on operations during the compliance test (under procedures prescribed in par. (d) 4.) or as otherwise specified and include these limits with the certification of compliance. The boiler or industrial furnace shall be operated in accordance with these operating limits and the applicable emissions standards of ss. NR 666.104 (2) to (5), 666.105, 666.106, 666.107 and sub. (1) (e) 1. d. at all times when there is hazardous waste in the unit.

1. Feed rate of total hazardous waste and (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5) and the total chlorine and chloride feed rate screening limits under s. NR 666.107 (2) or (5)), pumpable hazardous waste.

2. Feed rate of each metal in the following feedstreams:

a. Total feedstreams, except that:

1) Facilities that comply with Tier I or adjusted Tier I metals feed rate screening limits may set their operating limits at the metals feed rate screening limits determined under s. NR 666.106 (2) or (5).

2) Industrial furnaces that shall comply with the alternative metals implementation approach under par. (c) 2. shall specify limits on the concentration of each metal in the collected particulate matter in lieu of feed rate limits for total feedstreams.

b. Total hazardous waste feed (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5)).

c. Total pumpable hazardous waste feed (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5)).

3. Total feed rate of chlorine and chloride in total feed streams, except that facilities that comply with Tier I or adjusted Tier I feed rate screening limits may set their operating limits at the total chlorine and chloride feed rate screening limits determined under s. NR 666.107 (2) (a) or (5).

4. Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light–weight aggregate kilns is not limited.

5. Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas. When complying with the CO controls of s. NR 666.104 (2), the CO limit is 100 ppmv, and when complying with the HC controls of s. NR 666.104 (3), the HC limit is 20 ppmv. When complying with the CO controls of s. NR 666.104 (3), the CO limit is established based on the compliance test.

6. Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or adjusted Tier I feed rate screening limits for chlorine under s. NR 666.107 (2) (a) or (5) and for all metals under s. NR 666.106 (2) or (5), and the uncontrolled particulate emissions do not exceed the standard under s. NR 666.105.

7. Maximum combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible and is upstream of any quench water injection (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5)).

8. Maximum flue gas temperature entering a particulate matter control device (unless complying with Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5) and the total chlorine and chloride feed rate screening limits under s. NR 666.107 (2) or (5)).

9. For systems using wet scrubbers, including wet ionizing scrubbers (unless complying with Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) (a) or (5)):

a. Minimum liquid to flue gas ration.

b. Minimum scrubber blowdown from the system or maximum suspended solids content of scrubber water.

c. Minimum pH level of the scrubber water.

10. For systems using venturi scrubbers, the minimum differential gas pressure across the venturi (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5) and the total chlorine and chloride feed rate screening limits under s. NR 666.107 (2) (a) or (5)).

11. For systems using dry scrubbers (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5) and the total chlorine and chloride feed rate screening limits under s. NR 666.107 (2) (a) or (5)):

a. Minimum caustic feed rate.

b. Maximum flue gas flow rate.

12. For systems using wet ionizing scrubbers or electrostatic precipitators (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under s. NR 666.106 (2) or (5) and the total chlorine and chloride feed rate screening limits under s. NR 666.107 (2) (a) or (5)):

a. Minimum electrical power in kilovolt amperes (kVA) to the precipitator plates.

b. Maximum flue gas flow rate.

13. For systems using fabric filters (baghouses), the minimum pressure drop (unless complying with the Tier I or adjusted Tier I metal feed rate screening limits under s. NR 666.106 (2) or (5) and the total chlorine and chloride feed rate screening limits under s. NR 666.107 (2) (a) or (5)).

(b) *Prior notice of compliance testing.* At least 30 days prior to the compliance testing required by par. (c), the owner or operator shall notify the department and submit all of the following information:

1. General facility information including:

a. EPA facility ID number.

b. Facility name, contact person, telephone number and address.

c. Person responsible for conducting compliance test, including company name, address and telephone number, and a statement of qualifications.

d. Planned date of the compliance test.

2. Specific information on each device to be tested including:

a. Description of boiler or industrial furnace.

b. A scaled plot plan showing the entire facility and location of the boiler or industrial furnace.

c. A description of the air pollution control system.

d. Identification of the continuous emission monitors that are installed, including:

1) Carbon monoxide monitor.

2) Oxygen monitor.

3) Hydrocarbon monitor, specifying the minimum temperature of the system and, if the temperature is less than 150 °C, an explanation of why a heated system is not used (see par. (e)) and a brief description of the sample gas conditioning system.

e. Indication of whether the stack is shared with another device that will be in operation during the compliance test.

f. Other information useful to an understanding of the system design or operation.

3. Information on the testing planned, including a complete copy of the test protocol and quality assurance/quality control (QA/QC) plan, and a summary description for each test providing all of the following information at a minimum:

a. Purpose of the test (e.g., demonstrate compliance with emissions of particulate matter).

b. Planned operating conditions, including levels for each pertinent parameter specified in par. (a).

(c) *Compliance testing.* 1. 'General.' Compliance testing shall be conducted under conditions for which the owner or operator has submitted a certification of precompliance under sub. (2) and under conditions established in the notification of compliance testing required by par. (b). The owner or operator may seek approval on a case−by−case basis to use compliance test data from one unit in lieu of testing a similar onsite unit. To support the request, the owner or operator shall provide a comparison of the hazardous waste burned and other feedstreams, and the design, operation and maintenance of both the tested unit and the similar unit. The department shall provide a written approval to use compliance test data in lieu of testing a similar unit if it finds that the hazardous wastes, the devices and the operating conditions are sufficiently similar, and the data from the other compliance test is adequate to meet the requirements of this subsection.

2. 'Special requirements for industrial furnaces that recycle collected PM.' Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system shall comply with one of the following procedures for testing to determine compliance with the metals standards of s. NR 666.106 (3) or (4):

a. The special testing requirements prescribed in "Alternative Method for Implementing Metals Controls" in Appendix IX.

b. Stack emissions testing for a minimum of 6 hours each day while hazardous waste is burned during an interim license. The testing shall be conducted when burning normal hazardous waste for that day at normal feed rates for that day and when the air pollution control system is operated under normal conditions. During an interim license, hazardous waste analysis for metals content shall be sufficient for the owner or operator to determine if changes in metals content may affect the ability of the facility to meet the metals emissions standards established under s. NR 666.106 (3) or (4). Under this option, operating limits (under par. (a)) shall be established during compliance testing under this paragraph only on the following parameters:

1) Feed rate of total hazardous waste.

2) Total feed rate of chlorine and chloride in total feed streams.

3) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light−weight aggregate kilns is not limited.

4) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas.

5) Maximum production rate of the device in appropriate units when producing normal product.

c. Conduct compliance testing to determine compliance with the metals standards to establish limits on the operating parameters of par. (a) only after the kiln system has been conditioned to enable it to reach equilibrium with respect to metals fed into the system and metals emissions. During conditioning, hazardous waste and raw materials having the same metals content as will be fed during the compliance test shall be fed at the feed rates that will be fed during the compliance test.

3. 'Conduct of compliance testing.' a. If compliance with all applicable emissions standards of ss. NR 666.104 to 666.107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards shall be as close as possible to the original operating conditions.

b. Prior to obtaining test data for purposes of demonstrating compliance with the applicable emissions standards of ss. NR 666.104 to 666.107 or establishing limits on operating parameters under this section, the facility shall operate under compliance test conditions for a sufficient period to reach steady−state operations. Industrial furnaces that recycle collected particulate matter back into the furnace and that comply with subd. 2. a. or b., however, need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals.

c. Compliance test data on the level of an operating parameter for which a limit shall be established in the certification of compliance shall be obtained during emissions sampling for the pollutant or pollutants (i.e., metals, PM, HCl/Cl_2, organic compounds) for which the parameter shall be established as specified by par. (a).

(d) *Certification of compliance.* Within 90 days of completing compliance testing, the owner or operator shall certify to the department compliance with the emissions standards of ss. NR 666.104 (2), (3) and (5), 666.105, 666.106, 666.107 and sub. (1) (e) 1. d.. The certification of compliance shall include all of the following information:

1. General facility and testing information including:

a. EPA facility ID number.

b. Facility name, contact person, telephone number and address.

c. Person responsible for conducting compliance testing, including company name, address and telephone number, and a statement of qualifications.

d. Date or dates of each compliance test.

e. Description of boiler or industrial furnace tested.

f. Person responsible for quality assurance/quality control (QA/QC), title and telephone number, and statement that procedures prescribed in the QA/QC plan submitted under s. NR 666.103 (3) (b) 3. have been followed, or a description of any changes and an explanation of why changes were necessary.

g. Description of any changes in the unit configuration prior to or during testing that would alter any of the information submitted in the prior notice of compliance testing under par. (b), and an explanation of why the changes were necessary.

h. Description of any changes in the planned test conditions prior to or during the testing that alter any of the information submitted in the prior notice of compliance testing under par. (b), and an explanation of why the changes were necessary.

i. The complete report on results of emissions testing.

2. Specific information on each test including:

a. Purpose or purposes of test (e.g., demonstrate conformance with the emissions limits for particulate matter, metals, HCl, Cl_2, and CO).

b. Summary of test results for each run and for each test including the following information:

1) Date of run.

2) Duration of run.

3) Time−weighted average and highest hourly rolling average CO level for each run and for the test.

4) Highest hourly rolling average HC level, if HC monitoring is required for each run and for the test.

5) If dioxin and furan testing is required under s. NR 666.104 (5), time−weighted average emissions for each run and for the test of chlorinated dioxin and furan emissions, and the predicted maximum annual average ground level concentration of the toxicity equivalency factor.

6) Time−weighted average particulate matter emissions for each run and for the test.

7) Time−weighted average HCl and Cl_2 emissions for each run and for the test.

8) Time−weighted average emissions for the metals subject to regulation under s. NR 666.106 for each run and for the test.

9) QA/QC results.

3. Comparison of the actual emissions during each test with the emissions limits prescribed by ss. NR 666.104 (2), (3) and (5), 666.105, 666.106 and 666.107 and established for the facility in the certification of precompliance under sub. (2).

4. Determination of operating limits based on all valid runs of the compliance test for each applicable parameter listed in par. (a) using either of the following procedures:

a. A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the operating limit specified as the time−weighted average during all runs of the compliance test.

b. 1) The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

a) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

b) An hourly rolling average is the arithmetic mean of the 60 most recent 1−minute average values recorded by the continuous monitoring system.

2) The operating limit for the parameter shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average value for each run.

c. Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by subd. 4. b. or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

1) The feed rate of each metal shall be limited at any time to 10 times the feed rate that would be allowed on a hourly rolling average basis.

2) The continuous monitor shall meet the following specifications:

a) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

b) The rolling average for the selected averaging period is defined as arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60−minute period beginning at one minute after the beginning of preceding clock hour.

3) The operating limit for the feed rate of each metal shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average feed rate for each run.

d. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride and chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream shall be monitored under the continuous monitoring requirements of subd. 4. a. to c.

5. The following statement shall accompany the certification of compliance:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with s. NR 666.103 (3) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating conditions established in this certification pursuant to s. NR 666.103 (3) (d) 4. are enforceable limits at which the facility can legally operate during an interim license until a revised certification of compliance is submitted."

(e) *Special requirements for HC monitoring systems.* When an owner or operator is required to comply with the hydrocarbon (HC) controls provided by s. NR 666.104 (3) or sub. (1) (e) 1. d., a conditioned gas monitoring system may be used in conformance with specifications provided in Appendix IX if the owner or operator submits a certification of compliance without using extensions of time provided by par. (g).

(f) *Special operating requirements for industrial furnaces that recycle collected PM.* Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system shall do all of the following:

1. When complying with par. (c) 2. a., comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" in Appendix IX.

2. When complying with par. (c) 2. b., comply with the operating requirements prescribed by that subdivision paragraph.

(g) *Extensions of time.* 1. If the owner or operator does not submit a complete certification of compliance for all of the applicable emissions standards of ss. NR 666.104, 666.105, 666.106 and 666.107 by August 21, 1992, the owner or operator shall do one of the following:

a. Stop burning hazardous waste and begin closure activities under sub. (12) for the hazardous waste portion of the facility.

b. Limit hazardous waste burning only for purposes of compliance testing (and pretesting to prepare for compliance testing) a total period of 720 hours for the period of time beginning August 21, 1992, submit a notification to the department by August 21, 1992 stating that the facility is operating under restricted interim license and intends to resume burning hazardous waste, and submit a complete certification of compliance by August 23, 1993.

c. Obtain a case−by−case extension of time under subd. 2.

2. The owner or operator may request a case−by−case extension of time to extend any time limit provided by this paragraph if compliance with the time limit is not practicable for reasons beyond the control of the owner or operator.

a. In granting an extension, the department may apply conditions as the facts warrant to ensure timely compliance with this section and that the facility operates in a manner that does not pose a hazard to human health and the environment.

b. When an owner or operator requests an extension of time to enable the facility to comply with the alternative hydrocarbon provisions of s. NR 666.104 (6) and obtain a hazardous waste license because the facility cannot meet the HC limit of s. NR 666.104 (3):

1) The department shall, in considering whether to grant the extension, do all of the following:

a) Determine whether the owner and operator have submitted in a timely manner a complete feasibility and plan of operation report that includes information required under s. NR 670.022 (2).

b) Consider whether the owner and operator have made a good faith effort to certify compliance with all other emission controls, including the controls on dioxins and furans of s. NR 666.104 (5) and the controls on PM, metals, HCl and Cl_2.

2) If an extension is granted, the department shall, as a condition of the extension, require the facility to operate under flue gas concentration limits on CO and HC that, based on available information, including information in the feasibility and plan of operation report, are baseline CO and HC levels as defined by s. NR 666.104 (6) (a).

(h) *Revised certification of compliance.* The owner or operator may submit at any time a revised certification of compliance (recertification of compliance) under the following procedures:

1. Prior to submittal of a revised certification of compliance, hazardous waste may not be burned for more than a total of 720 hours under operating conditions that exceed those established

under a current certification of compliance, and such burning may be conducted only for purposes of determining whether the facility can operate under revised conditions and continue to meet the applicable emissions standards of ss. NR 666.104, 666.105, 666.106 and 666.107.

2. At least 30 days prior to first burning hazardous waste under operating conditions that exceed those established under a current certification of compliance, the owner or operator shall notify the department and submit the following information:

a. EPA facility ID number, and facility name, contact person, telephone number and address.

b. Operating conditions that the owner or operator is seeking to revise and description of the changes in facility design or operation that prompted the need to seek to revise the operating conditions.

c. A determination that when operating under the revised operating conditions, the applicable emissions standards of ss. NR 666.104, 666.105, 666.106 and 666.107 are not likely to be exceeded. To document this determination, the owner or operator shall submit the applicable information required under sub. (2) (b).

d. Complete emissions testing protocol for any pretesting and for a new compliance test to determine compliance with the applicable emissions standards of ss. NR 666.104, 666.105, 666.106 and 666.107 when operating under revised operating conditions. The protocol shall include a schedule of pre−testing and compliance testing. If the owner or operator revises the scheduled date for the compliance test, the owner or operator shall notify the department in writing at least 30 days prior to the revised date of the compliance test.

3. Conduct a compliance test under the revised operating conditions and the protocol submitted to the department to determine compliance with the applicable emissions standards of ss. NR 666.104, 666.105, 666.106 and 666.107.

4. Submit a revised certification of compliance under par. (d).

(4) PERIODIC RECERTIFICATIONS. The owner or operator shall conduct compliance testing and submit to the department a recertification of compliance under provisions of sub. (3) within 3 years from submitting the previous certification or recertification. If the owner or operator seeks to recertify compliance under new operating conditions, the owner or operator shall comply with sub. (3) (h).

(5) NONCOMPLIANCE WITH CERTIFICATION SCHEDULE. If the owner or operator does not comply with the interim license compliance schedule provided by subs. (2), (3) and (4), hazardous waste burning shall terminate on the date that the deadline is missed, closure activities shall begin under sub. (12), and hazardous waste burning may not resume except under an operating license issued under s. NR 670.066. For purposes of compliance with the closure provisions of sub. (12) and ss. NR 665.0112 (4) (b) and 665.0113 the boiler or industrial furnace has received "the known final volume of hazardous waste" on the date that the deadline is missed.

(6) STARTUP AND SHUTDOWN. Hazardous waste (except waste fed solely as an ingredient under the Tier I (or adjusted Tier I) feed rate screening limits for metals and chloride and chlorine) may not be fed into the device during startup and shutdown of the boiler or industrial furnace, unless the device is operating within the conditions of operation specified in the certification of compliance.

(7) AUTOMATIC WASTE FEED CUTOFF. During the compliance test required by sub. (3) (c), and upon certification of compliance under sub. (3), a boiler or industrial furnace shall be operated with a functioning system that automatically cuts off the hazardous waste feed when the applicable operating conditions specified in sub. (3) (a) 1. and 5. to 13. deviate from those established in the certification of compliance. In addition:

(a) To minimize emissions of organic compounds, the minimum combustion chamber temperature (or the indicator of combustion chamber temperature) that occurred during the compliance test shall be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber, with the minimum temperature during the compliance test defined as either of the following:

1. If compliance with the combustion chamber temperature limit is based on a hourly rolling average, the minimum temperature during the compliance test is considered to be the average over all runs of the lowest hourly rolling average for each run.

2. If compliance with the combustion chamber temperature limit is based on an instantaneous temperature measurement, the minimum temperature during the compliance test is considered to be the time−weighted average temperature during all runs of the test.

(b) Operating parameters limited by the certification of compliance shall continue to be monitored during the cutoff, and the hazardous waste feed may not be restarted until the levels of those parameters comply with the limits established in the certification of compliance.

(8) FUGITIVE EMISSIONS. Fugitive emissions shall be controlled by one of the following:

(a) Keeping the combustion zone totally sealed against fugitive emissions.

(b) Maintaining the combustion zone pressure lower than atmospheric pressure.

(c) An alternate means of control that the owner or operator can demonstrate provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. Support for such demonstration shall be included in the operating record.

(9) CHANGES. A boiler or industrial furnace shall cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits specified in the certification of compliance.

(10) MONITORING AND INSPECTIONS. (a) The owner or operator shall monitor and record all of the following, at a minimum, while burning hazardous waste:

1. Feed rates and composition of hazardous waste, other fuels, and industrial furnace feed stocks, and feed rates of ash, metals, and total chloride and chlorine as necessary to ensure conformance with the certification of precompliance or certification of compliance.

2. Carbon monoxide (CO), oxygen, and if applicable, hydrocarbons (HC), on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with the operating limits specified in the certification of compliance. CO, HC and oxygen monitors shall be installed, operated and maintained in accordance with methods specified in Appendix IX.

3. Upon the request of the department, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feed stocks as appropriate) and the stack gas emissions shall be conducted to verify that the operating conditions established in the certification of precompliance or certification of compliance achieve the applicable standards of ss. NR 666.104, 666.105, 666.106 and 666.107.

(b) The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, etc.) shall be subjected to thorough visual inspection when they contain hazardous waste, at least daily for leaks, spills, fugitive emissions and signs of tampering.

(c) The automatic hazardous waste feed cutoff system and associated alarms shall be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the owner or operator can demonstrate that weekly inspections will unduly

restrict or upset operations and that less frequent inspections will be adequate. Support for such demonstration shall be included in the operating record. At a minimum, operational testing shall be conducted at least once every 30 days.

(d) These monitoring and inspection data shall be recorded and the records shall be placed in the operating log.

(11) RECORDKEEPING. The owner or operator shall keep in the operating record of the facility all information and data required by this section until closure of the boiler or industrial furnace unit.

(12) CLOSURE. At closure, the owner or operator shall remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters and scrubber sludges) from the boiler or industrial furnace and shall comply with ss. NR 665.0111 to 665.0115 .

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

NR 666.104 Standards to control organic emissions. (1) DRE STANDARD. (a) *General.* Except as provided in par. (c), a boiler or industrial furnace burning hazardous waste shall achieve a destruction and removal efficiency (DRE) of 99.99% for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99% DRE shall be demonstrated during a trial burn for each principal organic hazardous constituent (POHC) designated (under par. (b)) in its license for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = \left[1 - \frac{W_{out}}{W_{in}} \right] \times 100$$

where:

W_{in} = Mass feed rate of one principal organic hazardous constituent (POHC) in the hazardous waste fired to the boiler or industrial furnace

W_{out} = Mass emission rate of the same POHC present in stack gas prior to release to the atmosphere

(b) *Designation of POHCs.* Principal organic hazardous constituents (POHCs) are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn in conformance with procedures prescribed in s. NR 670.066. One or more POHCs shall be designated by the department for each waste feed to be burned. POHCs shall be designated based on the degree of difficulty of destruction of the organic constituents in the waste and on their concentrations or mass in the waste feed considering the results of waste analyses submitted with the feasibility and plan of operation report. POHCs are most likely to be selected from among those compounds listed in ch. NR 661, Appendix VIII that are also present in the normal waste feed. However, if the applicant demonstrates to the department's satisfaction in writing that a compound not listed in Appendix VIII or not present in the normal waste feed is a suitable indicator of compliance with the DRE requirements, that compound may be designated as a POHC. Such POHCs need not be toxic or organic compounds.

(c) *Dioxin–listed waste.* A boiler or industrial furnace burning hazardous waste containing (or derived from) EPA hazardous waste numbers F020, F021, F022, F023, F026 or F027 shall achieve a destruction and removal efficiency (DRE) of 99.9999% for each POHC designated (under par. (b)) in its license. This performance shall be demonstrated on POHCs that are more difficult to burn than tetra–, penta– and hexachlorodibenzo–*p*–dioxins and dibenzofurans. DRE is determined for each POHC from the equation in par. (a). In addition, the owner or operator of the boiler or industrial furnace shall notify the department of intent to burn EPA hazardous waste numbers F020, F021, F022, F023, F026 or F027.

(d) *Automatic waiver of DRE trial burn.* Owners and operators of boilers operated under the special operating requirements provided by s. NR 666.110 are considered to be in compliance with the DRE standard of par. (a) and are exempt from the DRE trial burn.

(e) *Low risk waste.* Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with s. NR 666.109 (1) are considered to be in compliance with the DRE standard of par. (a) and are exempt from the DRE trial burn.

(2) CARBON MONOXIDE STANDARD. (a) Except as provided in sub. (3), the stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste cannot exceed 100 ppmv on an hourly rolling average basis (i.e., over any 60 minute period), continuously corrected to 7% oxygen, dry gas basis.

(b) CO and oxygen shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Carbon Monoxide and Oxygen for Incinerators, Boilers and Industrial Furnaces Burning Hazardous Waste" in Appendix IX.

(c) Compliance with the 100 ppmv CO limit shall be demonstrated during the trial burn (for new facilities or an interim license facility applying for an operating license) or the compliance test (for interim license facilities). To demonstrate compliance, the highest hourly rolling average CO level during any valid run of the trial burn or compliance test may not exceed 100 ppmv.

(3) ALTERNATIVE CARBON MONOXIDE STANDARD. (a) The stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste may exceed the 100 ppmv limit if stack gas concentrations of hydrocarbons (HC) do not exceed 20 ppmv, except as provided by sub. (6) for certain industrial furnaces.

(b) HC limits shall be established under this section on an hourly rolling average basis (i.e., over any 60 minute period), reported as propane, and continuously corrected to 7% oxygen, dry gas basis.

(c) HC shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers and Industrial Furnaces Burning Hazardous Waste" in Appendix IX. CO and oxygen shall be continuously monitored in conformance with sub. (2) (b).

(d) The alternative CO standard is established based on CO data during the trial burn (for a new facility) and the compliance test (for an interim license facility). The alternative CO standard is the average over all valid runs of the highest hourly average CO level for each run. The CO limit is implemented on an hourly rolling average basis, and continuously corrected to 7% oxygen, dry gas basis.

(4) SPECIAL REQUIREMENTS FOR FURNACES. Owners and operators of industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see s. NR 666.103 (1) (e) 2.) at any location other than the end where products are normally discharged and where fuels are normally fired shall comply with the hydrocarbon limits provided by sub. (3) or (6) irrespective of whether stack gas CO concentrations meet the 100 ppmv limit of sub. (2).

(5) CONTROLS FOR DIOXINS AND FURANS. Owners and operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of 450 to 750 °F, and industrial furnaces operating under an alternative hydrocarbon limit established under sub. (6) shall conduct a site–specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo–p–dioxins and dibenzofurans do not result in an increased lifetime cancer risk to the hypothetical maximum exposed individual (MEI) exceeding 1 in 100,000:

(a) During the trial burn (for new facilities or an interim license facility applying for an operating license) or compliance test (for interim license facilities), determine emission rates of the tetra–octa congeners of chlorinated dibenzo–p–dioxins and dibenzofu-

rans (CDDs/CDFs) using Method 0023A, Sampling Method for Polychlorinated Dibenzo−p−Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources, EPA SW−846, as incorporated by reference in s. NR 660.11.

(b) Estimate the 2,3,7,8−TCDD toxicity equivalence of the tetra−octa CDDs/CDFs congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo−p−Dioxin and Dibenzofuran Congeners" in Appendix IX. Multiply the emission rates of CDD/CDF congeners with a toxicity equivalence greater than 0 (see the procedure) by the calculated toxicity equivalence factor to estimate the equivalent emission rate of 2,3,7,8−TCDD.

(c) Conduct dispersion modeling using methods recommended in Appendix W of 40 CFR part 51 ("Guideline on Air Quality Models (Revised)" (1986) and its supplements, incorporated by reference in s. NR 660.11), the "Hazardous Waste Combustion Air Quality Screening Procedure", provided in Appendix IX, or in Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, EPA−450/R−92−019, incorporated by reference in s. NR 660.11, to predict the maximum annual average off−site ground level concentration of 2,3,7,8−TCDD equivalents determined under par. (b). The maximum annual average concentration shall be used when a person resides on−site.

(d) The ratio of the predicted maximum annual average ground level concentration of 2,3,7,8−TCDD equivalents to the risk−specific dose for 2,3,7,8−TCDD provided in Appendix V (2.2×10^{-7}) may not exceed 1.0.

(6) MONITORING CO AND HC IN THE BY−PASS DUCT OF A CEMENT KILN. Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by subs. (2), (3) and (4) by monitoring in the by−pass duct if both of the following conditions are met:

(a) Hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow.

(b) The by−pass duct diverts a minimum of 10% of kiln off−gas into the duct.

(7) USE OF EMISSIONS TEST DATA TO DEMONSTRATE COMPLIANCE AND ESTABLISH OPERATING LIMITS. Compliance with this section shall be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the CO and HC limits of this section or to establish alternative CO or HC limits under this section shall be obtained during the time that DRE testing, and where applicable, CDD/CDF testing under sub. (5) and comprehensive organic emissions testing under sub. (6) is conducted.

(8) ENFORCEMENT. For the purposes of license enforcement, compliance with the operating requirements specified in the license (under s. NR 666.102) shall be regarded as compliance with this section. However, evidence that compliance with those license conditions is insufficient to ensure compliance with this section may be information justifying modification or revocation and re−issuance of a license under s. NR 670.041.

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

NR 666.105 Standards to control particulate matter.

(1) A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) after correction to a stack gas concentration of 7% oxygen, using procedures prescribed in 40 CFR part 60, appendix A, methods 1 to 5, incorporated by reference in s. NR 660.11, and Appendix IX.

(2) An owner or operator meeting s. NR 666.109 (2) for the low risk waste exemption is exempt from the particulate matter standard.

(3) OXYGEN CORRECTION. (a) Measured pollutant levels shall be corrected for the amount of oxygen in the stack gas according to the formula:

$$Pc = Pm \times 14 / (E - Y)$$

where:

Pc is the corrected concentration of the pollutant in the stack gas, Pm is the measured concentration of the pollutant in the stack gas, E is the oxygen concentration on a dry basis in the combustion air fed to the device, and Y is the measured oxygen concentration on a dry basis in the stack.

(b) For devices that feed normal combustion air, E will equal 21%. For devices that feed oxygen−enriched air for combustion (that is, air with an oxygen concentration exceeding 21%), the value of E will be the concentration of oxygen in the enriched air.

(c) Compliance with all emission standards provided by this subchapter shall be based on correcting to 7% oxygen using this procedure.

(4) For the purposes of license enforcement, compliance with the operating requirements specified in the license (under s. NR 666.102) shall be regarded as compliance with this section. However, evidence that compliance with those license conditions is insufficient to ensure compliance with this section may be information justifying modification or revocation and re−issuance of a license under s. NR 670.041.

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

NR 666.106 Standards to control metals emissions.

(1) GENERAL. The owner or operator shall comply with the metals standards provided by subs. (2), (3), (4), (5) or (6) for each metal listed in sub. (2) that is present in the hazardous waste at detectable levels using analytical procedures specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW−846, incorporated by reference in s. NR 660.11.

(2) TIER I FEED RATE SCREENING LIMITS. Feed rate screening limits for metals are specified in Appendix I as a function of terrain−adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in par. (g).

(a) *Noncarcinogenic metals.* The feed rates of antimony, barium, lead, mercury, thallium and silver in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks may not exceed the screening limits specified in Appendix I.

1. The feed rate screening limits for antimony, barium, mercury, thallium and silver are based on either of the following:

a. An hourly rolling average as defined in s. NR 666.102 (5) (f) 1. b.

b. An instantaneous limit not to be exceeded at any time.

2. The feed rate screening limit for lead is based on one of the following:

a. An hourly rolling average as defined in s. NR 666.102 (5) (f) 1. b.

b. An averaging period of 2 to 24 hours as defined in s. NR 666.102 (5) (f) 2. with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis.

c. An instantaneous limit not to be exceeded at any time.

(b) *Carcinogenic metals.* 1. The feed rates of arsenic, cadmium, beryllium and chromium in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks may not exceed values derived from the screening limits specified in Appendix I. The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the feed rate screening limit specified in Appendix I may not exceed 1.0, as provided by the following equation:

$$\sum_{i=1}^{n} \frac{AFR_{(i)}}{FRSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AFR = actual feed rate to the device for metal "i"

FRSL = feed rate screening limit provided by Appendix I for metal "i"

2. The feed rate screening limits for the carcinogenic metals are based on either of the following:

a. An hourly rolling average.

b. An averaging period of 2 to 24 hours as defined in s. NR 666.102 (5) (f) 2. with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis.

(c) *TESH.* 1. The terrain–adjusted effective stack height is determined according to the following equation:

TESH = Ha+H1−Tr

where:

Ha = Actual physical stack height

H1 = Plume rise as determined from Appendix VI as a function of stack flow rate and stack gas exhaust temperature

Tr = Terrain rise within 5 kilometers of the stack

2. The stack height (Ha) may not exceed good engineering practice as specified in 40 CFR 51.100(ii).

3. If the TESH for a particular facility is not listed in the table in the appendices, the nearest lower TESH listed in the table shall be used. If the TESH is 4 meters or less, a value of 4 meters shall be used.

(d) *Terrain type.* The screening limits are a function of whether the facility is located in noncomplex or complex terrain. A device located where any part of the surrounding terrain within 5 kilometers of the stack equals or exceeds the elevation of the physical stack height (Ha) is considered to be in complex terrain and the screening limits for complex terrain apply. Terrain measurements are to be made from U.S. geological survey 7.5–minute topographic maps of the area surrounding the facility.

(e) *Land use.* The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, procedures provided in Appendices IX or X shall be used.

(f) *Multiple stacks.* Owners and operators of facilities with more than one on–site stack from a boiler, industrial furnace, incinerator or other thermal treatment unit subject to controls of metals emissions under an operating license or interim license shall comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst–case stack based on dispersion characteristics. The worst–case stack is determined from the following equation as applied to each stack:

K = HVT

where:

K = a parameter accounting for relative influence of stack height and plume rise

H = physical stack height (meters)

V = stack gas flow rate (m^3/second)

T = exhaust temperature (°K)

The stack with the lowest value of K is the worst–case stack.

(g) *Criteria for facilities not eligible for screening limits.* If any of the following criteria are met, the Tier I and Tier II screening limits do not apply. Owners and operators of such facilities shall comply with either the Tier III standards provided by sub. (4) or with the adjusted Tier I feed rate screening limits provided by sub. (5).

1. The device is located in a narrow valley less than one kilometer wide.

2. The device has a stack taller than 20 meters and is located such that the terrain rises to the physical height within one kilometer of the facility.

3. The device has a stack taller than 20 meters and is located within 5 kilometers of a shoreline of a large body of water such as an ocean or large lake.

4. The physical stack height of any stack is less than 2.5 times the height of any building within 5 building heights or 5 projected building widths of the stack and the distance from the stack to the closest boundary is within 5 building heights or 5 projected building widths of the associated building.

5. The department determines that standards based on site–specific dispersion modeling are required.

(h) *Implementation.* The feed rate of metals in each feedstream shall be monitored to ensure that the feed rate screening limits are not exceeded.

(3) TIER II EMISSION RATE SCREENING LIMITS. Emission rate screening limits are specified in Appendix I as a function of terrain–adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in sub. (2) (g).

(a) *Noncarcinogenic metals.* The emission rates of antimony, barium, lead, mercury, thallium and silver may not exceed the screening limits specified in Appendix I.

(b) *Carcinogenic metals.* The emission rates of arsenic, cadmium, beryllium and chromium may not exceed values derived from the screening limits specified in Appendix I. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in Appendix I may not exceed 1.0, as provided by the following equation:

$$\sum_{i=1}^{n} \frac{AER_{(i)}}{ERSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AER = actual emission rate for metal "i"

ERSL = emission rate screening limit provided by Appendix I for metal "i"

(c) *Implementation.* The emission rate limits shall be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim license facility applying for a license) or the compliance test (for interim license facilities). The feed rate averaging periods are the same as provided by sub. (2) (a) 1. and 2. and (b) 2. The feed rate of metals in each feedstream shall be monitored to ensure that the feed rate limits for the feedstreams specified under s. NR 666.102 or 666.103 are not exceeded.

(d) *Definitions and limitations.* The definitions and limitations provided by sub. (2) for the following terms also apply to the Tier II emission rate screening limits provided by this subsection: terrain–adjusted effective stack height, good engineering practice stack height, terrain type, land use and criteria for facilities not eligible to use the screening limits.

(e) *Multiple stacks.* 1. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator or other thermal treatment unit subject to controls on metals emissions under an operating license or interim license shall comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst–case stack based on dispersion characteristics.

2. The worst–case stack is determined by procedures provided in sub. (2) (f).

3. For each metal, the total emissions of the metal from those stacks may not exceed the screening limit for the worst–case stack.

(4) TIER III AND ADJUSTED TIER I SITE–SPECIFIC RISK ASSESSMENT. The requirements of this subsection apply to facilities complying with either the Tier III or adjusted Tier I controls, except where specified otherwise.

(a) *General.* Conformance with the Tier III metals controls shall be demonstrated by emissions testing to determine the emission rate for each metal. In addition, conformance with either the Tier III or adjusted Tier I metals controls shall be demonstrated by air dispersion modeling to predict the maximum annual average off–site ground level concentration for each dispersion modeling to predict the maximum annual average off–site ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.

(b) *Acceptable ambient levels.* Appendices IV and V list the acceptable ambient levels for purposes of this rule. Reference air concentrations (RACs) are listed for the noncarcinogenic metals and 10^{-5} risk–specific doses (RSDs) are listed for the carcinogenic metals. The RSD for a metal is the acceptable ambient level for that metal if only one of the 4 carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the RSD as described in par. (c).

(c) *Carcinogenic metals.* For the carcinogenic metals, arsenic, cadmium, beryllium and chromium, the sum of the ratios of the predicted maximum annual average off–site ground level concentrations (except that on–site concentrations shall be considered if a person resides on site) to the risk–specific dose (RSD) for all carcinogenic metals emitted may not exceed 1.0 as determined by the following equation:

$$\sum_{i=1}^{n} \frac{\text{Predicted Ambient Concentration}_{(i)}}{\text{Risk - Specific Dose}_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

(d) *Noncarcinogenic metals.* For the noncarcinogenic metals, the predicted maximum annual average off–site ground level concentration for each metal may not exceed the reference air concentration (RAC).

(e) *Multiple stacks.* Owners and operators of facilities with more than one on–site stack from a boiler, industrial furnace, incinerator or other thermal treatment unit subject to controls on metals emissions under an operating license or interim license shall conduct emissions testing (except that facilities complying with adjusted Tier I controls need not conduct emissions testing) and dispersion modeling to demonstrate that the aggregate emissions from all such on–site stacks do not result in an exceedance of the acceptable ambient levels.

(f) *Implementation.* Under Tier III, the metals controls shall be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim license facility applying for an operating license) or the compliance test (for interim license facilities). The feed rate averaging periods are the same as provided by sub. (2) (a) 1. and 2. and (b) 2. The feed rate of metals in each feedstream shall be monitored to ensure that the feed rate limits for the feedstreams specified under s. NR 666.102 or 666.103 are not exceeded.

(5) ADJUSTED TIER 1 FEED RATE SCREENING LIMITS. The owner or operator may adjust the feed rate screening limits provided by Appendix I to account for site–specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back–calculating from the acceptable ambient level provided by Appendices IV and V using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in sub. (2) (b).

(6) ALTERNATIVE IMPLEMENTATION APPROACHES. (a) The department may approve on a case–by–case basis approaches to implement the Tier II or Tier III metals emission limits provided by sub. (3) or (4) alternative to monitoring the feed rate of metals in each feedstream.

(b) The emission limits provided by sub. (4) shall be determined as follows:

1. For each noncarcinogenic metal, by back–calculating from the RAC provided in Appendix IV to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with sub. (8).

2. For each carcinogenic metal by all of the following:

a. Back–calculating from the RSD provided in Appendix V to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with sub. (8).

b. If more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by subd. 2. a. such that the sum for all carcinogenic metals of the ratios of the selected emission limit to the emission rate determined by subd. 2. a. does not exceed 1.0.

(7) EMISSION TESTING. (a) *General.* Emission testing for metals shall be conducted using Method 0060, Determinations of Metals in Stack Emissions, EPA SW–846, as incorporated by reference in s. NR 660.11.

(b) *Hexavalent chromium.* Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in Method 0061, Determination of Hexavalent Chromium Emissions from Stationary Sources, EPA SW–846, as incorporated by reference in s. NR 660.11.

(8) DISPERSION MODELING. Dispersion modeling required under this section shall be conducted according to methods recommended in Appendix W of 40 CFR part 51 ("Guideline on Air Quality Models (Revised)" (1986) and its supplements, incorporated by reference in s. NR 660.11), the "Hazardous Waste Combustion Air Quality Screening Procedure", provided in Appendix IX , or in Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, EPA–450/R–92–019, incorporated by reference in s. NR 660.11, to predict the maximum annual average off–site ground level concentration. However, on–site concentrations shall be considered when a person resides on–site.

(9) ENFORCEMENT. For the purposes of license enforcement, compliance with the operating requirements specified in the license (under s. NR 666.102) shall be regarded as compliance with this section. However, evidence that compliance with those license conditions is insufficient to ensure compliance with this section may be information justifying modification or revocation and re–issuance of a license under s. NR 670.041.

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

NR 666.107 Standards to control hydrogen chloride (HCl) and chlorine gas (Cl_2) emissions. (1) GENERAL. The owner or operator shall comply with the hydrogen chloride (HCl) and chlorine (Cl_2) controls provided by sub. (2), (3) or (5).

(2) SCREENING LIMITS. (a) *Tier I feed rate screening limits.* Feed rate screening limits are specified for total chlorine in Appendix II as a function of terrain–adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feed streams, including hazardous waste, fuels and industrial furnace feed stocks may not exceed the levels specified.

(b) *Tier II emission rate screening limits.* Emission rate screening limits for HCl and Cl_2 are specified in Appendix III as a function of terrain–adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of HCl and Cl_2 may not exceed the levels specified.

(c) *Definitions and limitations.* The definitions and limitations provided by s. NR 666.106 (2) for the following terms also apply to the screening limits provided by this subsection: terrain–adjusted effective stack height, good engineering practice stack height, terrain type, land use and criteria for facilities not eligible to use the screening limits.

(d) *Multiple stacks.* Owners and operators of facilities with more than one on–site stack from a boiler, industrial furnace, incinerator or other thermal treatment unit subject to controls on HCl or Cl_2 emissions under an operating license or interim license shall comply with the Tier I and Tier II screening limits for those stacks assuming all hazardous waste is fed into the device with the worst–case stack based on dispersion characteristics.

1. The worst–case stack is determined by procedures provided in s. NR 666.106 (2) (f).

2. Under Tier I, the total feed rate of chlorine and chloride to all subject devices may not exceed the screening limit for the worst–case stack.

3. Under Tier II, the total emissions of HCl and Cl_2 from all subject stacks may not exceed the screening limit for the worst–case stack.

(3) TIER III SITE–SPECIFIC RISK ASSESSMENTS. (a) *General.* Conformance with the Tier III controls shall be demonstrated by emissions testing to determine the emission rate for HCl and Cl_2, air dispersion modeling to predict the maximum annual average off–site ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.

(b) *Acceptable ambient levels.* Appendix IV lists the reference air concentrations (RACs) for HCl (7 micrograms per cubic meter) and Cl_2 (0.4 micrograms per cubic meter).

(c) *Multiple stacks.* Owners and operators of facilities with more than one on–site stack from a boiler, industrial furnace, incinerator or other thermal treatment unit subject to controls on HCl or Cl_2 emissions under an operating license or interim license shall conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such on–site stacks do not result in an exceedance of the acceptable ambient levels for HCl and Cl_2.

(4) AVERAGING PERIODS. The HCl and Cl_2 controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels and industrial furnace feed stocks. Under Tier I, the feed rate of total chloride and chlorine is limited to the Tier I screening limits. Under Tier II and Tier III, the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn (for new facilities or an interim license facility applying for a license) or the compliance test (for interim license facilities). The feed rate limits are based on either of the following:

(a) An hourly rolling average as defined in s. NR 666.102 (5) (f).

(b) An instantaneous basis not to be exceeded at any time.

(5) ADJUSTED TIER I FEED RATE SCREENING LIMITS. The owner or operator may adjust the feed rate screening limit provided by Appendix II to account for site–specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back–calculating from the acceptable ambient level for Cl_2 provided by Appendix IV using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit.

(6) EMISSIONS TESTING. Emissions testing for HCl and Cl_2 shall be conducted using the procedures described in Methods 0050 or 0051, EPA SW–846, as incorporated by reference in s. NR 660.11.

(7) DISPERSION MODELING. Dispersion modeling shall be conducted according to s. NR 666.106 (8).

(8) ENFORCEMENT. For the purposes of license enforcement, compliance with the operating requirements specified in the license (under s. NR 666.102) shall be regarded as compliance with this section. However, evidence that compliance with those license conditions is insufficient to ensure compliance with this section may be information justifying modification or revocation and re–issuance of a license under s. NR 670.041.

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

NR 666.108 Small quantity on–site burner exemption. (1) EXEMPT QUANTITIES. Owners and operators of facilities that burn hazardous waste in a non–site boiler or industrial furnace are exempt from this subchapter if all of the following conditions are met:

(a) The quantity of hazardous waste burned in a device for a calendar month does not exceed the limits provided in the following table based on the terrain–adjusted effective stack height as defined in s. NR 666.106 (2) (c).

Exempt Quantities for Small Quantity Burner Exemption

Terrain–adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate (gallons/ month)	Terrain–adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate (gallons/month)
0 to 3.9	0	40.0 to 44.9	210
4.0 to 5.9	13	45.0 to 49.9	260
6.0 to 7.9	18	50.0 to 54.9	330
8.0 to 9.9	27	55.0 to 59.9	400
10.0 to 11.9	40	60.0 to 64.9	490
12.0 to 13.9	48	65.0 to 69.9	610
14.0 to 15.9	59	70.0 to 74.9	680
16.0 to 17.9	69	75.0 to 79.9	760
18.0 to 19.9	76	80.0 to 84.9	850
20.0 to 21.9	84	85.0 to 89.9	960
22.0 to 23.9	93	90.0 to 94.9	1,100
24.0 to 25.9	100	95.0 to 99.9	1,200
26.0 to 27.9	110	100.0 to 104.9	1,300
28.0 to 29.9	130	105.0 to 109.9	1,500
30.0 to 34.9	140	110.0 to 114.9	1,700
35.0 to 39.9	170	115.0 or greater	1,900

(b) The maximum hazardous waste firing rate does not exceed at any time one percent of the total fuel requirements for the device (hazardous waste plus other fuel) on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste.

(c) The hazardous waste has a minimum heating value of 5,000 Btu/lb, as generated.

(d) The hazardous waste fuel does not contain (and is not derived from) EPA hazardous waste numbers F020, F021, F022, F023, F026 or F027.

(2) MIXING WITH NONHAZARDOUS FUELS. If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with sub. (1).

(3) MULTIPLE STACKS. If an owner or operator burns hazardous waste in more than one on−site boiler or industrial furnace exempt under this section, the quantity limits provided by sub. (1) (a) are implemented according to the following equation:

$$\sum_{i=1}^{n} \frac{\text{Actual Quantity Burned}_{(i)}}{\text{Allowable Quantity Burned}_{(i)}} \leq 1.0$$

where:

n means the number of stacks.

Actual Quantity Burned means the waste quantity burned per month in device "i".

Allowable Quantity Burned means the maximum allowable exempt quantity for stack "i" from the table in sub. (1) (a)

Note: Hazardous wastes that are subject to the special requirements for small quantity generators under s. NR 662.220 may be burned in an off−site device under the exemption provided by this section, but shall be included in the quantity determination for the exemption.

(4) NOTIFICATION REQUIREMENTS. The owner or operator of facilities qualifying for the small quantity burner exemption under this section shall provide a one−time signed, written notice to the department indicating all of the following:

(a) The combustion unit is operating as a small quantity burner of hazardous waste.

(b) The owner and operator are in compliance with this section.

(c) The maximum quantity of hazardous waste that the facility may burn per month as provided by sub. (1) (a).

(5) RECORDKEEPING REQUIREMENTS. The owner or operator shall maintain at the facility for at least 3 years sufficient records documenting compliance with the hazardous waste quantity, firing rate and heating value limits of this section. At a minimum, these records shall indicate the quantity of hazardous waste and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

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

NR 666.109 Low risk waste exemption. (1) WAIVER OF DRE STANDARD. The DRE standard of s. NR 666.104 (1) does not apply if the boiler or industrial furnace is operated in conformance with par. (a) and the owner or operator demonstrates by procedures prescribed in par. (b) that the burning will not result in unacceptable adverse health effects.

(a) The device shall be operated with all of the following conditions:

1. A minimum of 50% of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the department on a case−by−case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed primary fuel for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50% primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired.

2. Primary fuels and hazardous waste fuels shall have a minimum as−fired heating value of 8,000 Btu/lb.

3. The hazardous waste shall be fired directly into the primary fuel flame zone of the combustion chamber.

4. The device shall operate in conformance with the carbon monoxide controls provided by s. NR 666.104 (2) (a). Devices subject to the exemption provided by this section are not eligible for the alternative carbon monoxide controls provided by s. NR 666.104 (3).

(b) Procedures to demonstrate that the hazardous waste burning will not pose unacceptable adverse public health effects are all of the following:

1. Identify and quantify those nonmetal compounds listed in ch. NR 661, Appendix VIII that could reasonably be expected to be present in the hazardous waste. The constituents excluded from analysis shall be identified and the basis for their exclusion explained.

2. Calculate reasonable, worst case emission rates for each constituent identified in subd. 1. by assuming the device achieves 99.9% destruction and removal efficiency. That is, assume that 0.1% of the mass weight of each constituent fed to the device is emitted.

3. For each constituent identified in subd. 1., use emissions dispersion modeling to predict the maximum annual average ground level concentration of the constituent.

a. Dispersion modeling shall be conducted using methods specified in s. NR 666.106 (8).

b. Owners and operators of facilities with more than one on−site stack from a boiler or industrial furnace that is exempt under this section shall conduct dispersion modeling of emissions from all stacks exempt under this section to predict ambient levels prescribed by this subdivision.

4. Ground level concentrations of constituents predicted under subd. 3. may not exceed all of the following levels:

a. For the noncarcinogenic compounds listed in Appendix IV, the levels established in Appendix IV.

b. For the carcinogenic compounds listed in Appendix V, the sum for all constituents of the ratios of the actual ground level concentration to the level established in Appendix V cannot exceed 1.0.

c. For constituents not listed in Appendix IV or V, 0.1 micrograms per cubic meter.

(2) WAIVER OF PARTICULAR MATTER STANDARD. The particulate matter standard of s. NR 666.105 does not apply if both of the following conditions are met:

(a) The DRE standard is waived under sub. (1).

(b) The owner or operator complies with the Tier I or adjusted Tier I metals feed rate screening limits provided by s. NR 666.106 (2) or (5).

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

NR 666.110 Waiver of DRE trial burn for boilers. Boilers that operate under the special requirements of this section, and that do not burn hazardous waste containing (or derived from) EPA hazardous waste numbers F020, F021, F022, F023, F026 or F027, are considered to be in conformance with the DRE standard of s. NR 666.104 (1), and a trial burn to demonstrate DRE is waived. When burning hazardous waste, all of the following apply:

(1) A minimum of 50% of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the department on a case−by−case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed primary fuel for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50% primary fuel firing rate shall be determined on a total heat or mass

input basis, whichever results in the greater mass feed rate of primary fuel fired.

(2) Boiler load may not be less than 40%. Boiler load is the ratio at any time of the total heat input to the maximum design heat input.

(3) Primary fuels and hazardous waste fuels shall have a minimum as–fired heating value of 8,000 Btu/lb, and each material fired in a burner where hazardous waste is fired shall have a heating value of at least 8,000 Btu/lb, as–fired.

(4) The device shall operate in conformance with the carbon monoxide standard provided by s. NR 666.104 (2) (a). Boilers subject to the waiver of the DRE trial burn provided by this section are not eligible for the alternative carbon monoxide standard provided by s. NR 666.104 (3).

(5) The boiler shall be a watertube type boiler that does not feed fuel using a stoker or stoker type mechanism.

(6) The hazardous waste shall be fired directly into the primary fuel flame zone of the combustion chamber with an air or steam atomization firing system, mechanical atomization system, or a rotary cup atomization system under any of the following conditions:

(a) *Viscosity.* The viscosity of the hazardous waste fuel as–fired may not exceed 300 SSU.

(b) *Particle size.* When a high pressure air or steam atomizer, low pressure atomizer or mechanical atomizer is used, 70% of the hazardous waste fuel shall pass through a 200 mesh (74 micron) screen, and when a rotary cup atomizer is used, 70% of the hazardous waste shall pass through a 100 mesh (150 micron) screen.

(c) *Mechanical atomization systems.* Fuel pressure within a mechanical atomization system and fuel flow rate shall be maintained within the design range taking into account the viscosity and volatility of the fuel.

(d) *Rotary cup atomization systems.* Fuel flow rate through a rotary cup atomization system shall be maintained within the design range taking into account the viscosity and volatility of the fuel.

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

NR 666.111 Standards for direct transfer. (1) APPLICABILITY. The regulations in this section apply to owners and operators of boilers and industrial furnaces subject to s. NR 666.102 or 666.103 if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.

(2) DEFINITIONS. (a) When used in this section, the following terms have the meanings given in subds. 1. and 2.:

1. "Direct transfer equipment" means any device (including but not limited to, such devices as piping, fittings, flanges, valves and pumps) that is used to distribute, meter or control the flow of hazardous waste between a container (i.e., transport vehicle) and a boiler or industrial furnace.

2. "Container" means any portable device in which hazardous waste is transported, stored, treated or otherwise handled, and includes transport vehicles that are containers themselves (e.g., tank trucks, tanker–trailers and rail tank cars), and containers placed on or in a transport vehicle.

(b) This section references several requirements provided in subchs. I and J of chs. NR 664 and 665. For purposes of this section, the term tank systems in those referenced requirements means direct transfer equipment as defined in par. (a).

(3) GENERAL OPERATING REQUIREMENTS. (a) No direct transfer of a pumpable hazardous waste shall be conducted from an open–top container to a boiler or industrial furnace.

(b) Direct transfer equipment used for pumpable hazardous waste shall always be closed, except when necessary to add or remove the waste, and may not be opened, handled or stored in a manner that may cause any rupture or leak.

(c) The direct transfer of hazardous waste to a boiler or industrial furnace shall be conducted so that it does not do any of the following:

1. Generate extreme heat or pressure, fire, explosion or violent reaction.

2. Produce uncontrolled toxic mists, fumes, dusts or gases in sufficient quantities to threaten human health.

3. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions.

4. Damage the structural integrity of the container or direct transfer equipment containing the waste.

5. Adversely affect the capability of the boiler or industrial furnace to meet the standards provided by ss. NR 666.104 to 666.107.

6. Threaten human health or the environment.

(d) Hazardous waste may not be placed in direct transfer equipment, if it could cause the equipment or its secondary containment system to rupture, leak, corrode or otherwise fail.

(e) The owner or operator of the facility shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include, at a minimum, all of the following:

1. Spill prevention controls (e.g., check valves, dry discount couplings).

2. Automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.

(4) AREAS WHERE DIRECT TRANSFER VEHICLES (CONTAINERS) ARE LOCATED. Applying the definition of container under this section, owners and operators shall comply with all of the following requirements:

(a) The containment requirements of s. NR 664.0175.

(b) The use and management requirements of subch. I of ch. NR 665, except for ss. NR 665.0170 and 665.0174, and except that in lieu of the special requirements of s. NR 665.0176 for ignitable or reactive waste, the owner or operator may comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjacent property line that can be built upon as required in Tables 2–1 to 2–6 of the National Fire Protection Association's (NFPA) "Flammable and Combustible Liquids Code," (1977 or 1981), incorporated by reference in s. NR 660.11. The owner or operator shall obtain and keep on file at the facility a written certification by the local fire marshal that the installation meets the subject NFPA codes.

(c) The closure requirements of s. NR 664.0178.

(5) DIRECT TRANSFER EQUIPMENT. Direct transfer equipment shall meet all of the following requirements:

(a) *Secondary containment.* Owners and operators shall comply with the secondary containment requirements of s. NR 665.0193, except for s. NR 665.0193 (1), (4), (5) and (9) as follows:

1. For all new direct transfer equipment, prior to their being put into service.

2. For existing direct transfer equipment within 2 years after August 21, 1991.

(b) *Requirements prior to meeting secondary containment requirements.* 1. For existing direct transfer equipment that does not have secondary containment, the owner or operator shall determine whether the equipment is leaking or is unfit for use. The owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified, registered professional engineer in accordance with s. NR 670.011 that attests to the equipment's integrity by August 21, 1992.

2. The assessment under subd. 1. shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the wastes to be

transferred to ensure that it will not collapse, rupture or fail. At a minimum, this assessment shall consider all of the following:

a. Design standards, if available, according to which the direct transfer equipment was constructed.

b. Hazardous characteristics of the wastes that have been or will be handled.

c. Existing corrosion protection measures.

d. Documented age of the equipment, if available (otherwise, an estimate of the age).

e. Results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion and erosion are accounted for.

3. If, as a result of the assessment specified above, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator shall comply with s. NR 665.0196 (1) and (2).

(c) *Inspections and recordkeeping.* 1. The owner or operator shall inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle (container) to the boiler or industrial furnace all of the following:

a. Overfill or spill control equipment (e.g., waste−feed cutoff systems, bypass systems and drainage systems) to ensure that it is in good working order.

b. The above ground portions of the direct transfer equipment to detect corrosion, erosion or releases of waste (e.g., wet spots, dead vegetation).

c. Data gathered from monitoring equipment and leak−detection equipment, (e.g., pressure and temperature gauges) to ensure that the direct transfer equipment is being operated according to its design.

2. The owner or operator shall inspect cathodic protection systems, if used, to ensure that they are functioning properly according to the schedule provided by s. NR 665.0195 (2).

3. Records of inspections made under this paragraph shall be maintained in the operating record at the facility, and available for inspection for at least 3 years from the date of the inspection.

(d) *Design and installation of new ancillary equipment.* Owners and operators shall comply with s. NR 665.0192.

(e) *Response to leaks or spills.* Owners and operators shall comply with s. NR 665.0196.

(f) *Closure.* Owners and operators shall comply with s. NR 665.0197, except for s. NR 665.0197 (3) (b) to (d).

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

NR 666.112 Regulation of residues. A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of a hazardous waste under s. NR 661.04 (2) (d), (g) or (h) unless the device and the owner or operator meet all of the following requirements:

(1) The device meets the following criteria:

(a) *Boilers.* Boilers shall burn at least 50% coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal.

(b) *Ore or mineral furnaces.* Industrial furnaces subject to s. NR 661.04 (2) (g) shall process at least 50% by weight normal, nonhazardous raw materials.

(c) *Cement kilns.* Cement kilns shall process at least 50% by weight normal cement−production raw materials.

(2) The owner or operator demonstrates that the hazardous waste does not significantly affect the residue by demonstrating conformance with either of the following criteria:

(a) *Comparison of waste−derived residue with normal residue.* The waste−derived residue may not contain ch. NR 661, Appendix VIII constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonably be attributable to burning or processing the hazardous waste (constituents of concern) include toxic constituents in the hazardous waste, and the organic compounds listed in Appendix VIII that may be generated as products of incomplete combustion. Sampling and analyses shall be in conformance with procedures prescribed in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA SW−846, incorporated by reference in s. NR 660.11 (1). For polychlorinated dibenzo−p−dioxins and polychlorinated dibenzo−furans, analyses shall be performed to determine specific congeners and homologues, and the results converted to 2,3,7,8−TCDD equivalent values using the procedure specified in section 4.0 of Appendix IX .

1. 'Normal residue.' Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of 10 samples representing a minimum of 10 days of operation. Composite samples may be used to develop a sample for analysis if the compositing period does not exceed 24 hours. The upper tolerance limit (at 95% confidence with a 95% proportion of the sample distribution) of the concentration in the normal residue shall be considered the statistically−derived concentration in the normal residue. If changes in raw materials or fuels reduce the statistically−derived concentrations of the toxic constituents of concern in the normal residue, the statistically−derived concentrations shall be revised or statistically−derived concentrations of toxic constituents in normal residue shall be established for a new mode of operation with the new raw material or fuel. To determine the upper tolerance limit in the normal residue, the owner or operator shall use statistical procedures prescribed in "Statistical Methodology for Bevill Residue Determinations" in Appendix IX.

2. 'Waste−derived residue.' Waste−derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24−hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residue under subd. 1. If so, hazardous waste burning has significantly affected the residue and the residue may not be excluded from the definition of a hazardous waste. Concentrations of toxic constituents of concern in the waste−derived residue shall be determined based on analysis of one or more samples obtained over a 24−hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis if the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste−derived residues generated over a 24−hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded.

(b) *Comparison of waste−derived residue concentrations with health−based limits.* 1. 'Nonmetal constituents.' The concentration of each nonmetal toxic constituent of concern (specified in par. (a)) in the waste−derived residue may not exceed the health−based level specified in Appendix VII, or the level of detection (using analytical procedures prescribed in SW−846), whichever is higher. If a health−based limit for a constituent of concern is not listed in Appendix VII, then a limit of 0.002 micrograms per kilogram or the level of detection (using analytical procedures contained in SW−846, or other appropriate methods), whichever is higher, shall be used. The levels specified in Appendix VII (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of Appendix VII) are administratively stayed under the condition, for those constituents specified in par. (a), that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in s. NR 668.43 for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good−faith efforts as defined by applicable department guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the

owner or operator may demonstrate such good faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by s. NR 668.43 for F039 nonwastewaters. In complying with the s. NR 668.43 F039 nonwastewater levels for polychlorinated dibenzo–p–dioxins and polychlorinated dibenzo–furans, analyses shall be performed for total hexachlorodibenzo–p–dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo–p–dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo–p–dioxins and total tetrachlorodibenzofurans.

Note: The administrative stay, under the condition that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in s. NR 668.43 for F039 nonwastewaters, remains in effect until further administrative action is taken and notice is published in the federal register and the Code of Federal Regulations.

2. 'Metal constituents.' The concentration of metals in an extract obtained using the toxicity characteristic leaching procedure of s. NR 661.24 may not exceed the levels specified in Appendix VII.

3. 'Sampling and analysis.' Waste–derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24–hour period has concentrations of toxic constituents that are higher than the health–based levels. Concentrations of toxic constituents of concern in the waste–derived residue shall be determined based on analysis of one or more samples obtained over a 24–hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis if the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste–derived residues generated over a 24–hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded.

(3) Records sufficient to document compliance with this section shall be retained until closure of the boiler or industrial furnace unit. At a minimum, all of the following shall be recorded:

(a) Levels of constituents in ch. NR 661, Appendix VIII that are present in waste–derived residues.

(b) If the waste–derived residue is compared with normal residue under sub. (2) (a), both of the following:

1. The levels of constituents in ch. NR 661, Appendix VIII that are present in normal residues.

2. Data and information, including analyses of samples as necessary, obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.

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

Subchapter M — Military Munitions

NR 666.200 Applicability. (1) This subchapter identifies when military munitions become a solid waste, and, if these wastes are also hazardous under this subchapter or ch. NR 661, the management standards that apply to these wastes.

(2) Unless otherwise specified in this subchapter, all applicable requirements in chs. NR 660 to 670 apply to waste military munitions.

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NR 666.201 Definitions. The following definitions apply to this subchapter:

(1) "Active range" means a military range that is currently in service and is being regularly used for range activities.

(2) "Chemical agent and munition" means an agent or munition that, through its chemical properties, produces lethal or other damaging effects on human beings, except that the term does not include riot control agents, chemical herbicides, smoke and other obscuration materials.

(3) "DDESB" means the United States department of defense explosives safety board.

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

(5) "Military" means the U.S. department of defense (DOD), U.S. armed services, U.S. coast guard, national guard, U.S. department of energy (DOE), or other parties under contract or acting as an agent for any of them, who handle military munitions.

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

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

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

NR 666.202 Definition of solid waste. (1) A military munition is not a solid waste when either of the following occurs:

(a) It is used for its intended purpose, including any of the following:

1. Use in training military personnel or explosives and munitions emergency response specialists (including training in proper destruction of unused propellant or other munitions).

2. Use in research, development, testing and evaluation of military munitions, weapons or weapon systems.

3. Recovery, collection and on–range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, "use for intended purpose" does not include the on–range disposal or burial of unexploded ordnance and contaminants when the burial is not a result of product use.

(b) It is an unused munition, or component thereof, which is being repaired, reused, recycled, reclaimed, disassembled, reconfigured or otherwise subjected to materials recovery activities, unless the activities involve use constituting disposal as defined in s. NR 661.02 (3) (a), or burning for energy recovery as defined in s. NR 661.02 (3) (b).

(2) An unused military munition is a solid waste when any of the following occurs:

(a) The munition is abandoned by being disposed of, burned, detonated (except during intended use as specified in sub. (1)), incinerated or treated prior to disposal.

(b) The munition is removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, incinerated or treated prior to disposal.

(c) The munition is deteriorated or damaged (e.g., the integrity of the munition is compromised by cracks, leaks or other damage) to the point that it cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes.

(d) The munition has been declared a solid waste by an authorized military official.

(3) A used or fired military munition is a solid waste when either of the following occurs:

(a) When it is transported off range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal or treatment prior to disposal.

(b) If it is recovered, collected and then disposed of by burial, or landfilling either on or off a range.

(4) For purposes of s. 289.01 (33), Stats., a used or fired military munition is a solid waste, and, therefore, is potentially subject to corrective action authorities under ss. 291.37, 291.95 and

291.97, Stats., and subch. S of ch. NR 664, or imminent danger authorities under s. 291.85, Stats., if the munition lands off–range and is not promptly rendered safe or retrieved. Any imminent danger threats associated with any remaining material shall be addressed. If remedial action is infeasible, the operator of the range shall maintain a record of the event for as long as any threat remains. The record shall include the type of munition and its location (to the extent the location is known).

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

NR 666.203 Standards applicable to the transportation of solid waste military munitions. (1) CRITERIA FOR HAZARDOUS WASTE REGULATION OF WASTE NON–CHEMICAL MILITARY MUNITIONS IN TRANSPORTATION. (a) Waste military munitions that are being transported and that exhibit a hazardous waste characteristic or are listed as hazardous waste under ch. NR 661, are subject to chs. NR 660 to 670, unless all the following conditions are met:

1. The waste military munitions are not chemical agents or chemical munitions.

2. The waste military munitions are transported in accordance with the U.S. department of defense shipping controls applicable to the transport of military munitions.

3. The waste military munitions are transported from a military owned or operated installation to a military owned or operated treatment, storage or disposal facility.

4. The transporter of the waste provides oral notice to the department within 24 hours from the time the transporter becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of this paragraph that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within 5 days from the time the transporter becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of this paragraph.

(b) If any waste military munitions shipped under par. (a) are not received by the receiving facility within 45 days of the day the waste was shipped, the owner or operator of the receiving facility shall report this non–receipt to the department within 5 days.

(c) The exemption in par. (a) from regulation as hazardous waste shall apply only to the transportation of non–chemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to storage, treatment or disposal.

(d) The conditional exemption in par. (a) applies only so long as all of the conditions in par. (a) are met.

(2) REINSTATEMENT OF EXEMPTION. If any waste military munition loses its exemption under sub. (1) (a), an application may be filed with the department for reinstatement of the exemption from hazardous waste transportation regulation with respect to the munition as soon as the munition is returned to compliance with the conditions of sub. (1) (a). If the department finds that reinstatement of the exemption is appropriate based on factors such as the transporter's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the department may reinstate the exemption under sub. (1) (a). If the department does not take action on the reinstatement application within 60 days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the department may terminate a conditional exemption reinstated by default in the preceding sentence if the department finds that reinstatement is inappropriate based on factors such as the transporter's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the exemption under sub. (1) (a), the department may specify additional conditions as are necessary to ensure and document proper transportation to protect human health and the environment.

(3) AMENDMENTS TO DOD SHIPPING CONTROLS. The U.S. department of defense shipping controls applicable to the transport of military munitions referenced in sub. (1) (a) 2. are U.S. government bill of lading (GBL) (U.S. government services administration (GSA) standard form 1103), DOD single line item requisition system document (manual) (DD form 1348), the signature and tally record (DD form 1907), dangerous goods shipping paper/declaration and emergency response information for hazardous materials transported by government vehicles/containers or vessel (DD form 836), and the motor vehicle inspection (transporting hazardous materials) (DD form 626) in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the U.S. department of defense shipping controls shall become effective for purposes of sub. (1) (a) on the date the U.S. department of defense publishes notice in the federal register that the shipping controls referenced in sub. (1) (a) 2. have been amended.

Note: GSA standard form 1103 may be obtained by calling federal supply customer assistance at (817) 978–2051. DD forms 626, 836, 1348 and 1907 may be obtained at: http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm.

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

NR 666.204 Standards applicable to emergency responses. Explosives and munitions emergencies involving military munitions or explosives are subject to ss. NR 662.010 (9), 663.10 (5), 664.0001 (7) (h), 665.0001 (3) (k) and 670.001 (3) (c), or alternatively to s. NR 670.061.

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

NR 666.205 Standards applicable to the storage of solid waste military munitions. (1) CRITERIA FOR HAZARDOUS WASTE REGULATION OF WASTE NON–CHEMICAL MILITARY MUNITIONS IN STORAGE. (a) Waste military munitions in storage that exhibit a hazardous waste characteristic or are listed as hazardous waste under ch. NR 661, are subject to chs. NR 660 to 679, unless all the following conditions are met:

1. The waste military munitions are not chemical agents or chemical munitions.

2. The waste military munitions are subject to the jurisdiction of the DDESB.

3. The waste military munitions are stored in accordance with the DDESB storage standards applicable to waste military munitions.

4. Within 90 days of August 1, 2006 or within 90 days of when a storage unit is first used to store waste military munitions, whichever is later, the owner or operator notifies the department of the location of any waste storage unit used to store waste military munitions for which the conditional exemption in this paragraph is claimed.

5. The owner or operator provides oral notice to the department within 24 hours from the time the owner or operator becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of this paragraph that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within 5 days from the time the owner or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of this paragraph.

6. The owner or operator inventories the waste military munitions at least annually, inspects the waste military munitions at least quarterly for compliance with the conditions of this paragraph and maintains records of the findings of these inventories and inspections for at least 3 years.

7. Access to the stored waste military munitions is limited to appropriately trained and authorized personnel.

(b) The conditional exemption in par. (a) from regulation as hazardous waste shall apply only to the storage of non–chemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to transportation, treatment or disposal.

(c) The conditional exemption in par. (a) applies only so long as all of the conditions in par. (a) are met.

(2) NOTICE OF TERMINATION OF WASTE STORAGE. The owner or operator shall notify the department when a storage unit identified in sub. (1) (a) 4. will no longer be used to store waste military munitions.

(3) REINSTATEMENT OF CONDITIONAL EXEMPTION. If any waste military munition loses its conditional exemption under sub. (1) (a), an application may be filed with the department for reinstatement of the conditional exemption from hazardous waste storage regulation with respect to the munition as soon as the munition is returned to compliance with the conditions of sub. (1) (a). If the department finds that reinstatement of the conditional exemption is appropriate based on factors such as the owner's or operator's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the department may reinstate the conditional exemption under sub. (1) (a). If the department does not take action on the reinstatement application within 60 days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the department may terminate a conditional exemption reinstated by default in the preceding sentence if it finds that reinstatement is inappropriate based on factors such as the owner's or operator's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the conditional exemption under sub. (1) (a), the department may specify additional conditions as are necessary to ensure and document proper storage to protect human health and the environment.

(4) WASTE CHEMICAL MUNITIONS. (a) Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under ch. NR 661, are subject to chs. NR 660 to 670.

(b) Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under ch. NR 661, are not subject to the storage prohibition in s. NR 668.50.

(5) AMENDMENTS TO DDESB STORAGE STANDARDS. The DDESB storage standards applicable to waste military munitions, referenced in sub. (1) (a) 3., are DOD 6055.9–STD ("DOD Ammunition and Explosives Safety Standards"), incorporated by reference in s. NR 660.11, except as provided in the following sentence. Any amendments to the DDESB storage standards shall become effective for purposes of sub. (1) (a) on the date the U.S. department of defense publishes notice in the federal register that the DDESB standards referenced in sub. (1) (a) have been amended.

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

NR 666.206 Standards applicable to the treatment and disposal of waste military munitions. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural and technical standards in chs. NR 660 to 670.

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

Subchapter N — Conditional Exemption for Low–Level Mixed Waste Storage, Treatment, Transportation and Disposal

TERMS

NR 666.210 What definitions apply to this subchapter? In this subchapter:

(1) "Agreement state" means a state that has entered into an agreement with the NRC under 42 USC 2021(b), to assume responsibility for regulating within its borders byproduct, source or special nuclear material in quantities not sufficient to form a critical mass.

(2) "Certified delivery" means certified mail with return receipt requested, or equivalent courier service, or other means, which provides the sender with a receipt confirming delivery.

(3) "Eligible naturally occurring or accelerator–produced radioactive material" or "eligible NARM" is NARM that is eligible for the transportation and disposal conditional exemption. It is a NARM waste that contains hazardous waste, meets the waste acceptance criteria of, and is allowed by state NARM rules to be disposed of at a low–level radioactive waste disposal facility licensed according to 10 CFR part 61 or NRC agreement state equivalent rules.

(4) "Exempted waste" means a waste that meets the eligibility criteria in s. NR 666.225 and meets all of the conditions in s. NR 666.230, or meets the eligibility criteria in s. NR 666.310 and complies with all of the conditions in s. NR 666.315. That waste is conditionally exempted from the regulatory definition of hazardous waste described in s. NR 661.03.

(5) "Hazardous waste" means any material which is defined to be hazardous waste in accordance with s. NR 661.03.

(6) "Land disposal restriction treatment standards" or "LDR treatment standards" means treatment standards under ch. NR 668, which a hazardous waste must meet before it can be disposed of in a hazardous waste land disposal unit.

(7) "License" means a license issued by the nuclear regulatory commission, or NRC agreement state, to users that manage radionuclides regulated by NRC, or NRC agreement states, under authority of 42 USC 2011 to 2297.

(8) "Low–level mixed waste" or "LLMW" is a waste that contains both low–level radioactive waste and hazardous waste.

(9) "Low–level radioactive waste" or "LLRW" is a radioactive waste which contains source, special nuclear or byproduct material, and which is not classified as high–level radioactive waste, transuranic waste, spent nuclear fuel or byproduct material as defined in 42 USC 2014(e)(2). (See also NRC definition of "waste" at 10 CFR 61.2)

(10) "Mixed waste" means a waste that contains both hazardous waste and source, special nuclear or byproduct material subject to 42 USC 2011 to 2297.

(11) "Naturally occurring or accelerator–produced radioactive material" or "NARM" means radioactive materials that are either of the following:

(a) Naturally occurring and not source, special nuclear or byproduct materials (as defined by 42 USC 2011 to 2297).

(b) Produced by an accelerator. NARM is regulated by the states under state law, or by the U.S. department of energy (DOE) (as authorized by 42 USC 2011 to 2297) under DOE orders.

(12) "NRC" means the U.S. nuclear regulatory commission.

(13) "We or us" within this subchapter, means the department as defined in s. NR 660.10.

(14) "You" means a generator, treater or other handler of low–level mixed waste or eligible NARM.

Note: The U.S. code (USC) cite is also known as the Atomic Energy Act of 1954, as amended.

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

STORAGE AND TREATMENT CONDITIONAL EXEMPTION AND ELIGIBILITY

NR 666.220 What does a storage and treatment conditional exemption do? The storage and treatment conditional exemption exempts your low–level mixed waste from the regulatory definition of hazardous waste in s. NR 661.03 if your waste meets the eligibility criteria in s. NR 666.225 and you meet the conditions in s. NR 666.230.

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

NR 666.225 What wastes are eligible for the storage and treatment conditional exemption? Low–level mixed waste (LLMW), defined in s. NR 666.210, is eligible for this conditional exemption if it is generated and managed by you under a single NRC or NRC agreement state license. (Mixed waste generated at a facility with a different license number and shipped to your facility for storage or treatment requires a hazardous waste operating license and is ineligible for this exemption. In addition, NARM waste is ineligible for this exemption.)

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

NR 666.230 What conditions must you meet for your LLMW to qualify for and maintain a storage and treatment exemption? (1) For your LLMW to qualify for the exemption you shall notify us in writing by certified delivery that you are claiming a conditional exemption for the LLMW stored on your facility. The dated notification shall include your name, address, EPA hazardous waste identification number, NRC or NRC agreement state license number, the hazardous waste codes and storage units for which you are seeking an exemption and a statement that you meet the conditions of this subchapter. Your notification shall be signed by your authorized representative who certifies that the information in the notification is true, accurate and complete. You shall notify us of your claim either within 90 days of August 1, 2006, or within 90 days of when a storage unit is first used to store conditionally exempt LLMW.

(2) To qualify for and maintain an exemption for your LLMW you shall do all of the following:

(a) Store your LLMW waste in tanks or containers in compliance with the requirements of your NRC or NRC agreement state license that apply to the proper storage of low–level radioactive waste (not including those license requirements that relate solely to recordkeeping).

(b) Store your LLMW in tanks or containers in compliance with chemical compatibility requirements of a tank or container in s. NR 664.0177 or 664.0199, or s. NR 665.0177 or 665.0199.

(c) Certify that facility personnel who manage stored conditionally exempt LLMW are trained in a manner that ensures that the conditionally exempt waste is safely managed and includes training in chemical waste management and hazardous materials incidents response that meets the personnel training standards found in s. NR 665.0016 (1) (c).

(d) Conduct an inventory of your stored conditionally exempt LLMW at least annually and inspect it at least quarterly for compliance with this subchapter.

(e) Maintain an accurate emergency plan and provide it to all local authorities who may have to respond to a fire, explosion or release of hazardous waste or hazardous constituents. Your plan shall describe emergency response arrangements with local authorities; describe evacuation plans; list the names, addresses and telephone numbers of all facility personnel qualified to work with local authorities as emergency coordinators and list emergency equipment.

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

TREATMENT

NR 666.235 What waste treatment does the storage and treatment conditional exemption allow? You may treat your low–level mixed waste at your facility within a tank or container in accordance with the terms of your NRC or NRC agreement state license. Treatment that cannot be done in a tank or container without a hazardous waste operating license (such as incineration) is not allowed under this exemption.

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

LOSS OF CONDITIONAL EXEMPTION

NR 666.240 How could you lose the conditional exemption for your LLMW and what action must you take? (1) Your LLMW will automatically lose the storage and treatment conditional exemption if you fail to meet any of the conditions specified in s. NR 666.230. When your LLMW loses the exemption, you shall immediately manage that waste which failed the condition as hazardous waste under chs. NR 660 to 670, and the storage unit storing the LLMW immediately becomes subject to hazardous waste container or tank storage requirements under subch. I or J of ch. NR 664.

(a) If you fail to meet any of the conditions specified in s. NR 666.230 you shall report to us and the NRC, or the oversight agency in the NRC agreement state, in writing by certified delivery within 30 days of learning of the failure. Your report shall be signed by your authorized representative certifying that the information provided is true, accurate and complete. This report shall include all of the following:

1. The specific conditions you failed to meet.

2. A description of the LLMW (including the waste name, hazardous waste codes and quantity) and storage location at the facility.

3. The dates on which you failed to meet the condition.

(b) If the failure to meet any of the conditions may endanger human health or the environment, you shall also immediately notify us orally within 24 hours and follow up with a written notification within 5 days. Failures that may endanger human health or the environment include, but are not limited to, discharge of a CERCLA reportable quantity or other leaking or exploding tanks or containers, or detection of radionuclides above background or hazardous constituents in the leachate collection system of a storage area. If the failure may endanger human health or the environment, you shall follow the provisions of your emergency plan.

(2) We may terminate your conditional exemption for your LLMW, or require you to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirements of this subchapter.

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

NR 666.245 If you lose the storage and treatment conditional exemption for your LLMW, can the exemption be reclaimed? (1) You may reclaim the storage and treatment exemption for your LLMW if you do all of the following:

(a) Again meet the conditions specified in s. NR 666.230.

(b) Send us a notice by certified delivery that you are reclaiming the exemption for your LLMW. Your notice shall be signed by your authorized representative certifying that the information contained in your notice is true, complete and accurate. In your notice you shall do all of the following:

1. Explain the circumstances of each failure.

2. Certify that you have corrected each failure that caused you to lose the exemption for your LLMW and that you again meet all the conditions as of the date you specify.

3. Describe plans that you have implemented, listing specific steps you have taken, to ensure the conditions will be met in the future.

4. Include any other information you want us to consider when we review your notice reclaiming the exemption.

(2) We may terminate a reclaimed conditional exemption if we find that your claim is inappropriate based on factors including, but not limited to, your failure to correct the problem, to provide a satisfactory explanation of the circumstances of the failure or to implement a plan with steps to prevent another failure to meet the conditions of s. NR 666.230. In reviewing a reclaimed condi-

tional exemption under this section, we may add conditions to the exemption to ensure that waste management during storage and treatment of the LLMW will protect human health and the environment.

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

STORAGE AND TREATMENT RECORDKEEPING

NR 666.250 What storage and treatment records must you keep at your facility and for how long? (1) In addition to those records required by your NRC or NRC agreement state license, you shall keep all of the following records:

(a) Your initial notification records, return receipts, reports to us of failures to meet the exemption conditions and all records supporting any reclaim of an exemption.

(b) Records of your LLMW annual inventories, and quarterly inspections.

(c) Your certification that facility personnel who manage stored mixed waste are trained in safe management of LLMW including training in chemical waste management and hazardous materials incidents response.

(d) Your emergency plan as specified in s. NR 666.230 (2).

(2) You shall maintain records concerning notification, personnel trained and your emergency plan for as long as you claim this exemption and for 3 years thereafter, or according to NRC regulations under 10 CFR part 20 (or equivalent NRC agreement state rules), whichever is longer. You shall maintain records concerning your annual inventory and quarterly inspections for 3 years after the waste is sent for disposal, or according to NRC regulations under 10 CFR part 20 (or equivalent NRC agreement state rules), whichever is longer.

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

REENTRY INTO HAZARDOUS WASTE REGULATION

NR 666.255 When is your LLMW no longer eligible for the storage and treatment conditional exemption? (1) When your LLMW has met the requirements of your NRC or NRC agreement state license for decay–in–storage and can be disposed of as non–radioactive waste, then the conditional exemption for storage no longer applies. On that date your waste is subject to hazardous waste regulation under the relevant sections of chs. NR 660 to 670, and the time period for accumulation of a hazardous waste as specified in s. NR 662.034 begins.

(2) When your conditionally exempt LLMW, which has been generated and stored under a single NRC or NRC agreement state license number, is removed from storage, it is no longer eligible for the storage and treatment exemption. However, your waste may be eligible for the transportation and disposal conditional exemption at s. NR 666.305.

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

STORAGE UNIT CLOSURE

NR 666.260 Do closure requirements apply to units that stored LLMW prior to the effective date of this subchapter? Interim licensed and operating licensed hazardous waste storage units that have been used to store only LLMW prior to August 1, 2006 and, after that date, store only LLMW which becomes exempt under this subchapter, are not subject to the closure requirements of chs. NR 664 and 665. Storage units (or portions of units) that have been used to store both LLMW and non–mixed hazardous waste prior to August 1, 2006 or are used to store both after that date remain subject to closure requirements with respect to the non–mixed hazardous waste.

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

TRANSPORTATION AND DISPOSAL CONDITIONAL EXEMPTION

NR 666.305 What does the transportation and disposal conditional exemption do? This conditional exemption exempts your waste from the regulatory definition of hazardous waste in s. NR 661.03 if your waste meets the eligibility criteria under s. NR 666.310, and you meet the conditions in s. NR 666.315.

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

ELIGIBILITY

NR 666.310 What wastes are eligible for the transportation and disposal conditional exemption? Eligible waste shall be either of the following:

(1) A low–level mixed waste (LLMW), as defined in s. NR 666.210, that meets the waste acceptance criteria of a LLRW disposal facility.

(2) An eligible NARM waste, defined in s. NR 666.210.

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

CONDITIONS

NR 666.315 What are the conditions you must meet for your waste to qualify for and maintain the transportation and disposal conditional exemption? You shall meet all of the following conditions for your eligible waste to qualify for and maintain the exemption:

(1) The eligible waste shall meet or be treated to meet LDR treatment standards as described in s. NR 666.320.

(2) If you are not already subject to NRC, or NRC agreement state equivalent manifest and transportation rules for the shipment of your waste, you shall manifest and transport your waste according to NRC regulations as described in s. NR 666.325.

(3) The exempted waste shall be in containers when it is disposed of in the LLRW disposal facility as described in s. NR 666.340.

(4) The exempted waste shall be disposed of at a designated LLRW disposal facility as described in s. NR 666.335.

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

NR 666.320 What treatment standards must your eligible waste meet? Your LLMW or eligible NARM waste shall meet the land disposal restriction (LDR) treatment standards specified in subch. D of ch. NR 668.

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

NR 666.325 Are you subject to the manifest and transportation condition in s. NR 666.315 (2)? If you are not already subject to NRC, or NRC agreement state equivalent manifest and transportation rules for the shipment of your waste, you shall meet the manifest requirements under 10 CFR 20.2006 (or NRC agreement state equivalent rules), and the transportation requirements under 10 CFR 1.5 (or NRC agreement state equivalent rules) to ship the exempted waste.

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

NR 666.330 When does the transportation and disposal exemption take effect? The exemption becomes effective once all the following have occurred:

(1) Your eligible waste meets the applicable LDR treatment standards.

(2) You have received return receipts that you have notified us and the LLRW disposal facility as described in s. NR 666.345.

(3) You have completed the packaging and preparation for shipment requirements for your waste according to NRC packaging and transportation regulations found under 10 CFR part 71 (or NRC agreement state equivalent rules); and you have prepared a manifest for your waste according to NRC manifest regulations found under 10 CFR part 20 (or NRC agreement state equivalent rules).

(4) You have placed your waste on a transportation vehicle destined for a LLRW disposal facility licensed by NRC or an NRC agreement state.

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

NR 666.335 Where must your exempted waste be disposed of? Your exempted waste shall be disposed of in a LLRW disposal facility that is regulated and licensed by NRC under 10 CFR part 61 or by an NRC agreement state under equivalent state rules, including state NARM licensing rules for eligible NARM.

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

NR 666.340 What type of container must be used for disposal of exempted waste? Your exempted waste shall be placed in containers before it is disposed. The container shall be any of the following:

(1) A carbon steel drum.

(2) An alternative container with equivalent containment performance in the disposal environment as a carbon steel drum.

(3) A high integrity container as defined by NRC.

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

NOTIFICATION

NR 666.345 Whom must you notify? (1) You shall provide a one–time notice to us stating that you are claiming the transportation and disposal conditional exemption prior to the initial shipment of an exempted waste from your facility to a LLRW disposal facility. Your dated written notice shall include your facility name, address, phone number and EPA ID number, and be sent by certified delivery.

(2) You shall notify the LLRW disposal facility receiving your exempted waste by certified delivery before shipment of each exempted waste. You may only ship the exempted waste after you have received the return receipt of your notice to the LLRW disposal facility. This notification shall include all of the following:

(a) A statement that you have claimed the exemption for the waste.

(b) A statement that the eligible waste meets applicable LDR treatment standards.

(c) Your facility's name, address and EPA hazardous waste ID number.

(d) The hazardous waste codes prior to the exemption of the waste streams.

(e) A statement that the exempted waste shall be placed in a container according to s. NR 666.340 prior to disposal in order for the waste to remain exempt under the transportation and disposal conditional exemption of this subchapter.

(f) The manifest number of the shipment that will contain the exempted waste.

(g) A certification that all the information provided is true, complete and accurate. Your authorized representative shall sign the statement.

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

GENERAL, TRANSPORTATION AND DISPOSAL RECORDKEEPING

NR 666.350 What general, transportation and disposal records must you keep at your facility and for how long? In addition to those records required by your NRC or NRC agreement state license, you shall keep records according to all of the following:

(1) You shall follow the applicable existing recordkeeping requirements under ss. NR 664.0073, 665.0073 and 668.07 to demonstrate that your waste has met LDR treatment standards prior to your claiming the exemption.

(2) You shall keep a copy of all notifications and return receipts required under ss. NR 666.355 and 666.360 for 3 years after the exempted waste is sent for disposal.

(3) You shall keep a copy of all notifications and return receipts required under s. NR 666.345 (1) for 3 years after the last exempted waste is sent for disposal.

(4) You shall keep a copy of the notification and return receipt required under s. NR 666.345 (2) for 3 years after the exempted waste is sent for disposal.

(5) If you are not already subject to NRC, or NRC agreement state equivalent manifest and transportation rules for the shipment of your waste, you shall also keep all other documents related to tracking the exempted waste as required under 10 CFR 20.2006 or NRC agreement state equivalent rules, including applicable NARM requirements, in addition to the records specified in subs. (1) to (4).

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

LOSS OF TRANSPORTATION AND DISPOSAL CONDITIONAL EXEMPTION

NR 666.355 How could you lose the transportation and disposal conditional exemption for your waste and what actions must you take? (1) Any waste will automatically lose the transportation and disposal exemption if you fail to manage it in accordance with all of the conditions specified in s. NR 666.315.

(a) When you fail to meet any of the conditions specified in s. NR 666.315 for any of your wastes, you shall report to us, in writing by certified delivery, within 30 days of learning of the failure. Your report shall be signed by your authorized representative certifying that the information provided is true, accurate and complete. This report shall include all of the following:

1. The specific conditions that you failed to meet for the waste.

2. A description of the waste (including the waste name, hazardous waste codes and quantity) that lost the exemption.

3. The dates on which you failed to meet the conditions for the waste.

(b) If the failure to meet any of the conditions may endanger human health or the environment, you shall also immediately notify us orally within 24 hours and follow up with a written notification within 5 days.

(2) We may terminate your ability to claim a conditional exemption for your waste, or require you to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirements of this subchapter.

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

NR 666.360 If you lose the transportation and disposal conditional exemption for a waste, can the exemption be reclaimed? (1) You may reclaim the transportation and disposal exemption for a waste after you have received a return receipt confirming that we have received your notification of the loss of the exemption specified in s. NR 666.355 (1) if both of the following apply:

(a) You again meet the conditions specified in s. NR 666.315 for the waste.

(b) You send a notice, by certified delivery, to us that you are reclaiming the exemption for the waste. Your notice shall be signed by your authorized representative certifying that the information provided is true, accurate and complete. The notice shall do all of the following:

1. Explain the circumstances of each failure.

2. Certify that each failure that caused you to lose the exemption for the waste has been corrected and that you again meet all conditions for the waste as of the date you specify.

3. Describe plans you have implemented, listing the specific steps that you have taken, to ensure that conditions will be met in the future.

4. Include any other information you want us to consider when we review your notice reclaiming the exemption.

(2) We may terminate a reclaimed conditional exemption if we find that your claim is inappropriate based on factors including, but not limited to, your failure to correct the problem, to pro-

vide a satisfactory explanation of the circumstances of the failure or to implement a plan with steps to prevent another failure to meet the conditions of s. NR 666.315. In reviewing a reclaimed conditional exemption under this section, we may add conditions to the exemption to ensure that transportation and disposal activities will protect human health and the environment.

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

Subchapter HH — Household and Very Small Quantity Generator Hazardous Waste Collection Facilities

NR 666.900 Applicability. This subchapter establishes minimum design and operating standards for owners or operators of collection facilities that collect or store household hazardous waste or very small quantity generator waste, or both. The owner or operator of a collection facility is exempt from the hazardous waste storage facility standards and licensing requirements in chs. NR 664, 665 and 670 if the owner or operator complies with all applicable requirements of this subchapter.

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

NR 666.901 Definitions. The following definitions apply to this subchapter:

(1) "Affected municipality" means a town, city, village or county in which a collection facility is located, or is proposed to be located.

(2) "Collection facility" means a facility established to collect or store household hazardous waste or very small quantity generator waste, or both.

(3) "Elementary neutralization unit" means a container or tank used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in s. NR 661.22, or they are listed in subch. D of ch. NR 661 only for corrosivity.

(4) "Household hazardous waste" means a household waste that exhibits a characteristic of hazardous waste or is listed in ch. NR 661.

(5) "Permanent collection facility" means a collection facility where household hazardous waste or very small quantity generator waste, or both, is collected or stored for more than 5 consecutive days.

(6) "Temporary collection facility" means a collection facility where household hazardous waste or very small quantity generator waste, or both, is collected or stored for no more than 5 consecutive days.

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

NR 666.902 Standards for design of permanent collection facilities. The owner or operator of a permanent collection facility shall construct and maintain the facility according to all of the following minimum design criteria:

(1) A collection facility may not be located in any of the following:

(a) A flood plain.

(b) A wetland.

(c) A habitat determined by the department to be critical to the continued existence of any threatened or endangered species listed in ch. NR 27.

(2) The maximum amount of hazardous waste stored may not exceed 240,000 pounds (109,091 kg).

(3) All hazardous waste shall be stored in containers in a building completely enclosed with a floor, walls and roof to prevent exposure to the elements.

(4) The floor underlying the containers shall be free of cracks and gaps and sufficiently impervious to contain leaks and spills until the released material is detected and removed.

(5) The floor shall be sloped or a containment system shall be designed and operated to drain and remove liquids resulting from leaks or spills, unless the containers are elevated or are otherwise prevented from contact with accumulated liquids.

(6) The containment system shall have sufficient capacity to contain the volume of the largest container, or 10% of the volume of all containers, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.

(7) Spilled or leaked waste shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system, or within 24 hours, whichever is less.

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

NR 666.903 Standards for operation of permanent collection facilities. An owner or operator of a permanent collection facility shall comply with all of the following:

(1) NOTIFICATION. At least 30 days prior to first accepting hazardous waste from off–site, submit the "Notification of Activity for Household and Very Small Quantity Generator Hazardous Waste Collection Facility" form 4430–020 to the department and to the clerk of the affected municipalities.

Note: This is a one–time notification. Permanent facilities that close for the season are not required to re–submit the form unless there is a change in ownership or facility operations.

Note: Form 4430–020 may be obtained from the department by phone (608) 266–2111, Fax (608) 267–2768 or E–mail: waste.management@dnr.state.wi.us

(3) STORAGE TIME LIMIT. Store hazardous waste for no longer than one year from the date the waste is received.

(4) CONTAINER MANAGEMENT. Manage containers of hazardous waste according to all of the following:

(a) Label each container with either the words "hazardous waste" or other words that identify the contents of the container.

(b) Clearly mark the accumulation start date on each container.

(c) Store waste in containers that are in good condition and compatible with the waste being stored.

(d) Store containers closed except when adding or removing waste.

(e) Open, handle and store containers to prevent ruptures and leaks.

(f) Inspect containers and the areas where they are stored at least weekly for leaks and deterioration caused by corrosion or other factors. Take immediate action to correct problems found during inspections.

(g) Maintain adequate aisle space in the container storage areas to allow for unobstructed movement of personnel, fire protection and spill control equipment in an emergency.

(5) IGNITABLE, REACTIVE OR INCOMPATIBLE WASTE. Manage ignitable, reactive or incompatible wastes according to all of the following:

(a) Store incompatible wastes in separate containers.

(b) Separate containers of incompatible wastes by means of a dike, berm, wall or other device.

(c) Store and protect ignitable or reactive wastes from sources of ignition or reaction.

(d) Post "No Smoking" signs in ignitable and reactive waste storage areas.

(6) SECURITY. Control entry of unauthorized persons to the container storage area at all times.

(7) PREPAREDNESS AND PREVENTION. Operate the facility to prevent fires or explosions or releases of hazardous waste which could threaten human health or the environment.

(8) EMERGENCY EQUIPMENT. Equip the facility with all of the following:

(a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel.

(b) A telephone (immediately available at the scene of operations) or a hand–held 2–way radio, capable of summoning emergency assistance from local police departments, fire departments or state or local emergency response teams.

(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas or dry chemicals) and spill control equipment.

(9) TESTING AND MAINTENANCE OF EMERGENCY EQUIPMENT. Test and maintain all facility communications or alarm systems, fire protection equipment and spill control equipment, where required, as necessary to assure its proper operation in time of emergency.

(10) CONTINGENCY PLAN. Prepare a contingency plan which describes the actions of facility personnel in response to fires, explosions or any releases of hazardous waste or materials. A spill prevention, control and countermeasures (SPCC) plan or some other emergency or contingency plan may be amended to incorporate the requirements of this subsection. Keep a copy of the contingency plan and all revisions at the facility and submit a copy to all local police departments, fire departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. Review and immediately amend the plan if the plan fails in an emergency or if changes are made to the design or operation that increase the potential for fires, explosions or releases of hazardous waste or changes the response necessary in an emergency. The plan shall shall be implemented immediately whenever there is a fire, explosion or release of hazardous waste that could threaten human health or the environment. The plan shall include all of the following:

(a) A description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors and state and local emergency response teams to coordinate emergency services.

(b) An up to date list of names, addresses and phone numbers (office and home) of all persons qualified to act as emergency coordinator. Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates. The primary and alternate emergency coordinators shall:

1. Either be on the facility premises or available to respond to an emergency by reaching the facility within a short period of time.

2. Be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility and the facility layout.

3. Have the authority to commit the resources needed to carry out the contingency plan.

(c) An up to date list of all emergency equipment at the facility, such as fire extinguishing systems, spill control equipment, communications and alarm systems. In addition, the plan shall include the location and a physical description of each item on the list and a brief outline of its capabilities.

(d) A plan to evacuate facility personnel where an evacuation may be necessary. Include the signals to be used to begin evacuation, evacuation routes and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

(11) EMERGENCY COORDINATOR. Assign at least one employee as emergency coordinator. The emergency coordinator shall be responsible for all of the following:

(a) Whenever there is an imminent or actual emergency situation, immediately:

1. Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel.

2. Notify appropriate state or local agencies with designated response roles if their help is needed.

(b) In the event of a fire, explosion or other release:

1. Immediately notify the national response center using their 24–hour toll free number (800) 424–8802 if there is a threat to human health or if a spill has reached surface water. Notification shall include the name and address of the facility owner, date, time and type of incident, quantity and type of hazardous waste involved in the incident, extent of injuries, if any, and estimated quantity and disposition of recovered materials, if any.

2. Notify the division of emergency management at (800) 943–0003, and comply with the remedial action requirements of s. 292.11, Stats., and ch. NR 706.

3. Identify the character, exact source, amount and areal extent of any released materials.

4. Assess possible hazards to human health or the environment that may result from the release, fire or explosion. This assessment shall consider both direct and indirect effects of the release, fire or explosion.

(c) Take all reasonable measures necessary to ensure that fires, explosions and releases do not occur, recur or spread to other hazardous waste at the facility.

(d) Immediately after an emergency, provide for treating, storing or disposing of recovered waste, contaminated soil or surface water or any other material that results from a release, fire or explosion at the facility.

Note: Unless the owner or operator can demonstrate, according to s. NR 661.03 (3) or (4), that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it according to all applicable requirements of chs. NR 662, 663 and this subchapter.

(12) PERSONNEL TRAINING. Train all facility personnel, either by classroom instruction or on the job training, related to job duties to ensure they are able to respond effectively to emergencies. Employees shall not work in unsupervised positions until the training is completed. The training shall:

(a) Familiarize staff with emergency equipment and procedures.

(b) Be completed within six months of employment.

(c) Be reviewed annually for all staff.

(13) ANNUAL REPORT. If any hazardous waste is shipped off–site to a licensed or permitted hazardous waste treatment, storage or disposal facility or recycling facility, other than a permanent collection facility, prepare and submit a single copy of an annual report to the department by March 1 of each year. The annual report shall be submitted on department forms and cover generator activities during the previous year.

Note: The annual report forms may be obtained from: http://dnr.wi.gov/org/aw/air/emission/crs/index.htm , or from the department by telephone at (608) 266–2111, fax (608) 267–2768 or E–mail: waste.management@dnr.state.wi.us

(14) RECORDKEEPING. Retain copies of annual reports and results of any certified laboratory hazardous waste analyses for a minimum of three years.

(15) BULKING. If hazardous waste is bulked, prevent the mixing of incompatible wastes by testing or applying knowledge of the waste.

(16) TREATMENT. If hazardous waste is treated, it shall only be done by being neutralized in an elementary neutralization unit, or by the addition of absorbent materials to wastes.

(17) VERY SMALL QUANTITY GENERATOR WASTE. If hazardous waste is accepted from very small quantity generators, provide a shipment receipt to the very small quantity generator. The shipment receipt shall include the information specified in pars. (a) to (c), and copies of the receipts shall be retained according to par. (d).

(a) The generator's company name and location, including street address, city and state.

(b) The quantity and type of waste.

(c) The date the waste was accepted by the collection facility.

(d) Retain a copy of the shipment receipt for a minimum of 3 years from the date the shipment was received.

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

NR 666.904 Standards for operation of temporary collection facilities. An owner or operator of a temporary collection facility shall comply with all of the following:

(1) NOTIFICATION. At least 30 days prior to first accepting hazardous waste from off–site, submit the "Notification of Activity for Household and Very Small Quantity Generator Hazardous Waste Collection Facility" form 4430–020 to the department.

Note: Form 4430–020 may be obtained from the department by telephone at (608)266–2111, fax (608) 267–2768 or E–mail: waste.management@dnr.state.wi.us

(2) CONTAINER MANAGEMENT. Manage containers of hazardous waste according to all of the following:

(a) Label each container with either the words "hazardous waste" or other words that identify the contents of the container.

(b) Clearly mark the accumulation starting date on each container.

(c) Open, handle and store waste in containers that are in good condition and compatible with the waste being stored.

(d) Store containers closed except when adding or removing waste.

(e) Manage containers to prevent ruptures and leaks.

(3) IGNITABLE, REACTIVE OR INCOMPATIBLE WASTE. Manage ignitable, reactive or incompatible wastes according to all of the following:

(a) Store incompatible wastes in separate containers.

(b) Separate containers of incompatible wastes.

(c) Store and protect ignitable or reactive wastes from sources of ignition or reaction.

(4) PREPAREDNESS AND PREVENTION. Operate the facility to prevent fires or explosions or releases of hazardous waste which could threaten human health or the environment.

(5) EMERGENCY PROCEDURES. At all times, ensure that at least one person on the premises is responsible for coordinating all of the following emergency response measures:

(a) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher.

(b) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil.

(c) In the event of a fire, explosion or other release which could threaten human health or if a spill has reached surface water, immediately notify the national response center, using their 24–hour toll free number (800)424–8802. The notification shall include all of the following information: The name and address of the facility owner, date, time and type of incident, quantity and type of hazardous waste involved in the incident, extent of injuries, if any and estimated quantity and disposition of recovered materials, if any.

(d) In the event of a release or discharge, notify the division of emergency management at (800) 943–0003 and comply with the requirements of s. 292.11, Stats., and ch. NR 706.

(6) PERSONNEL TRAINING. Ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities.

(7) BULKING. If hazardous waste is bulked, prevent the mixing of incompatible wastes by testing or applying knowledge of the waste.

(8) TREATMENT. If hazardous waste is treated, it shall only be done by being neutralized in an elementary neutralization unit, or by the addition of absorbent materials to wastes.

(9) VERY SMALL QUANTITY GENERATOR WASTE. If hazardous waste is accepted from very small quantity generators, provide a shipment receipt to the very small quantity generator. The shipment receipt shall include the information specified in pars. (a) to (c), and copies of the receipts shall be retained by the owner according to par. (d).

(a) The generator's company name and location, including street address, city and state.

(b) The quantity and type of waste.

(c) The date the waste was accepted by the collection facility.

(d) Retain a copy of shipment receipts for a minimum of 3 years from the date the shipment was received.

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

NR 666.905 Transportation requirements. (1) An owner or operator of a collection facility who offers hazardous waste for transportation off–site to a licensed or permitted hazardous waste treatment, storage or disposal facility, or recycling facility, shall comply with all of the following:

(a) Obtain an EPA ID number, using EPA Form 8700–12.

Note: The EPA notification form 8700–12 is available from: www.epa.gov/epaoswer/hazwaste/data/form8700/formmanagement , or from the department by telephone (608) 266–2111, fax (608) 267–2768 or E–mail: waste.management@dnr.state.wi.us

(b) Package the waste in accordance with the applicable U.S. department of transportation regulations on packaging under 49 CFR parts 173, 178 and 179.

(c) Label each package in accordance with the applicable U.S. department of transportation regulations on hazardous materials under 49 CFR part 172.

(d) Mark each package of hazardous waste in accordance with the applicable U.S. department of transportation regulations on hazardous materials under 49 CFR part 172, and mark each container of 110 gallons or less used in the transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304:

"HAZARDOUS WASTE—State and Federal Law Prohibit Improper Disposal. If found, contact the nearest police or public safety authority, state emergency management, state department of natural resources or the U.S. Environmental Protection Agency.

Generator's Name and Address_____.

Manifest Document Number_____."

(e) Ensure the initial transporter has the appropriate placards according to U.S. DOT regulations for hazardous materials under 49 CFR part 172, subpart F.

(f) The manifest consists of at least the number of copies which will provide the collection facility owner or operator, each transporter, the owner or operator of the designated facility, and the department with one copy each for their records and another final, signed copy to be returned to the collection facility owner or operator. Prepare and use a manifest, OMB control number 2050–0039, on EPA form 8700–22, and if necessary, EPA Form 8700–22A, according to the instructions in the appendix to 40 CFR part 262, and the following:

1. For shipments of hazardous waste outside of Wisconsin, submit a copy of each manifest to the department within 30 days of receiving the signed copy from the designated facility.

2. Keep a copy of each manifest signed by the collection facility owner or operator and the initial transporter for 3 years or until facility owner or operator receives a signed copy from the designated hazardous waste facility that received the waste. Retain the final, signed copy of the manifest as a record for at least 3 years from the date the waste was accepted by the initial transporter.

(g) Meet applicable land disposal restrictions standards in s. NR 668.07 (1).

(2) An owner or operator of a collection facility who self–transports hazardous waste off–site to a licensed or permitted hazardous waste treatment, storage or disposal facility, or a recycling facility shall comply with sub. (1) and ch. NR 663, hazardous waste transportation requirements.

(3) An owner or operator of a collection facility may transport hazardous waste, or offer hazardous waste for transport, to a permanent collection facility without using a hazardous waste manifest or obtaining a transportation license for the purpose of bulking or consolidating waste, if the collection facility owner or

operator complies with all of the following requirements prior to transporting the hazardous waste:

(a) Package the waste in accordance with the applicable U.S. department of transportation regulations on packaging under 49 CFR parts 173, 178 and 179.

(b) Label each package in accordance with the applicable U.S. department of transportation regulations on hazardous materials under 49 CFR part 172.

(c) Mark each package of hazardous waste in accordance with the applicable U.S. department of transportation regulations on hazardous materials under 49 CFR part 172, and mark each container of 110 gallons or less used in the transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304:

"HAZARDOUS WASTE—State and Federal Law Prohibit Improper Disposal. If found, contact the nearest police or public safety authority, state emergency management, state department of natural resources or the U.S. Environmental Protection Agency.

Generator's Name and Address_____.

Manifest Document Number_____."

(d) Use placards if required by U.S. DOT regulations for hazardous materials under 49 CFR part 172, subpart F.

(e) Provide written notification of the waste properties and applicable land disposal restrictions standards to the receiving collection facility.

History: CR 05–032: cr. Register July 2006 No. 607, eff. 8–1–06; **CR 06–102: am. (1) (f) Register March 2007 No. 615, eff. 4–1–07.**

NR 666.909 Closure requirements. (1) Within 5 days of initially accepting hazardous waste, an owner or operator of a temporary collection facility shall close the facility according to all of the following:

(a) Ensure delivery of all hazardous waste to an off–site licensed or permitted hazardous waste treatment, storage or disposal facility, recycling facility, or to a permanent collection facility.

(b) Close the collection facility in a manner that meets all of the following:

1. Minimizes the need for further maintenance.

2. Controls, minimizes or eliminates the escape of hazardous waste, hazardous constituents or contaminated run–off to the ground, surface waters or the atmosphere.

(2) An owner or operator of a permanent collection facility that closes for the season shall close the facility according to all of the following:

(a) Ensure delivery of all hazardous waste to an off–site licensed or permitted hazardous waste treatment, storage or disposal facility, recycling facility, or another permanent collection facility, within 90 days of the last day of accepting waste.

(b) Close the collection facility in a manner that meets all of the following:

1. Minimizes the need for further maintenance.

2. Controls, minimizes or eliminates the escape of hazardous waste, hazardous constituents or contaminated run–off to the ground, surface waters or the atmosphere.

(3) An owner or operator of a permanent collection facility that closes permanently shall close the facility according to all of the following:

(a) The standards in sub. (2) (a) and (b).

(b) All contaminated equipment, structures and soil shall be properly disposed of or decontaminated. By removing all hazardous wastes or hazardous constituents, the owner or operator may become a generator of hazardous waste and shall handle that hazardous waste in accordance with all applicable requirements of ch. NR 662.

(c) Within 60 days of completion of closure, submit a report to the department summarizing the activities performed to meet the requirements in pars. (a) and (b).

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

NR 666.910 Financial responsibility requirements for permanent collection facilities that store more than 80,000 pounds (36,364 kg.) of hazardous waste. (1) The owner or operator shall meet all of the following closure cost estimate requirements prior to storing more than 80,000 pounds of hazardous waste at any time:

(a) Obtain a detailed written estimate, in current dollars, of the cost of final closure of the collection facility as required in s. NR 666.909 (2) (a) and (b).

(b) Calculate the closure cost estimate using the cost of hiring a third party to remove and properly manage the estimated maximum inventory of waste. The quantity of hazardous waste stored at the collection facility shall not exceed the maximum inventory of waste used to calculate the closure cost estimate.

(c) Submit the detailed closure cost estimate to the department with the notification form required under s. NR 666.903 (1).

(d) Adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s), as required in s. NR 665.0143, or if any changes are made to the amount of hazardous waste stored. The adjustment may be made by recalculating the closure cost estimate in current dollars, or by using an inflation factor derived from the most recent implicit price deflator for gross domestic product published by the U.S. department of commerce in its *Survey of Current Business,* as specified in pars. (a) and (b). The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

1. The first adjustment shall be made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

2. Subsequent adjustments shall be made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

(2) The owner or operator shall meet all of the following financial assurance requirements prior to storing more than 80,000 pounds of hazardous waste:

(a) Establish financial assurance for closure of the collection facility, as required in s. NR 665.0143.

(b) Submit proof of financial assurance to the department with the notification form required under s. NR 666.903 (1).

(3) Within 60 days of receipt of the closure summary report required by s. NR 666.909 (3) (c), the department shall notify the owner or operator of one of the following:

(a) Closure is complete and the owner or operator may apply to the department for a release of the proof of financial responsibility.

(b) Additional closure activities are necessary to comply with s. NR 666.909 (3), and proof of financial responsibility shall be maintained.

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