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

The Wisconsin Natural Resources Board adopts an order to **renumber and amend** NR 465.11; to **amend** NR 460 Appendix JJ, 465(title), 465.01(1)(a), (b), (c)(intro.), (d) and (f) and (2), 465.02(intro.), (1), (11), (41) and (42), 465.03(intro.), 465.04(1)(a) and (2)(a), 465.05(2)(intro.), (5)(intro.) and (12)(a)1., (b)2. and (d), 465.055(1), 465.07(1)(a), (b) and (c)1. and 2., (2)(a), (3) and (4), 465.08(1)(a), (b), (c)1. and 2. and (d)(intro.), (2)(a) and (b)(intro.), (3) and (4), 465.10(6) to (9), 484.04(9) and (24), 484.10(22), and 484.11(6) including Table 6F; and to **create** NR 460 Appendix NNNN, 465 Subchapter I (title), 465 Subchapter III, 484.10(39e) and (55m) and 484.11(6)(b), relating to national emission standards for hazardous air pollutants for facilities that apply surface coatings to large appliances.

AM-17-03

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 227.11(2)(a), 285.11(1) and 285.27(2), Stats.

Statutes interpreted: s. 285.27(2), Stats.

This proposed order would incorporate into state rules existing national emission standards for hazardous air pollutants (NESHAP) for facilities that apply surface coatings to large appliances. These standards took effect on July 23, 2002, and are intended to protect public health by requiring the control of hazardous air pollutant (HAP) emissions to the level attainable by implementing maximum achievable control technology (MACT). Sources affected are new and existing facilities that apply surface coatings to large appliance parts or products, and which have the potential to emit more than 10 tons per year of a single HAP or more than 25 tons per year of an combination of HAPs. Examples of large appliances include cooking equipment such as ovens, ranges and microwave ovens; refrigerators and freezers; laundry equipment such as washers, dryers and dry cleaning machines; heating and air conditioning units; and water heaters, dish washers and trash compactors. Activities affected by these standards include all of those activities involving coatings, thinners and cleaning materials, such as surface preparation; coating preparation, application and drying or curing; equipment cleaning; storage of coatings, thinners and cleaning materials; and handling and conveying of waste generated by the coating operation. Compliance options involving averaging and pollution prevention methods, which allow the substitution of non-toxic materials, are provided.

The consent of the Attorney General and the Revisor of Statutes will be requested for the incorporation by reference of a new test method in ch. NR 484.

SECTION 1. NR 460.02(intro.) is amended to read:

NR 460.02 Definitions. (intro.) For terms not defined in this section, the definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the definitions in this section apply to the terms used in this chapter and, for terms not defined in chs. NR 463, 464 and 466 to 469 or the subchapters of ch. NR 465, to the terms used in those chapters or subchapters as well. If this section defines a term which is also defined in ch. NR 400, the definition in this section applies in this chapter and in chs. NR 463, 464 and 466 to 469 and the subchapters of ch. NR 465 rather than the definition in ch. NR 400, except that when one of those chapters or subchapters has its own definition of the term, that definition applies in that chapter or subchapter.

SECTION 2. NR 460 Appendix JJ is amended to read:

Chapter NR 460

Appendix JJ
General Provisions Applicable to Chapter NR 465 Subchapter I

The general provisions of this chapter listed under the column heading "Reference" apply to sources subject to ch. NR 465 subch. I only if a Yes appears in the same row under the column heading "Applies to Chapter NR 465 Subchapter I?". Certain provisions in other chapters which correspond to federal provisions in 40 CFR part 63 Subpart A are also included in the Reference column.

Reference	Applies to Chapter NR 465 Subchapter I?	Comment
[Body of table unchanged]		

SECTION 3. NR 460 Appendix NNNN, to follow Appendix KK, is created to read:

Chapter NR 460

Appendix NNNN

General Provisions Applicable to Chapter NR 465 Subchapter III

The general provisions of this chapter listed under the column heading "Reference" apply to sources subject to ch. NR 465 subch. III only if a Yes appears in the same row under the column heading "Applies to Chapter NR 465 Subchapter III?". Certain provisions in other chapters which correspond to federal provisions in 40 CFR part 63 Subpart A are also included in the Reference column.

Reference	Applies to Chapter NR 465 Subchapter III?	Comment
NR 2.19 and 2.195	Yes	
NR 406	Yes	
NR 407.04(1)(b)3.	Yes	
NR 460.02	Yes	Additional definitions in s. NR 465.22

Reference	Applies to Chapter NR 465 Subchapter III?	Comment
NR 460.03	Yes	
NR 460.04	Yes	
NR 460.05(1)	Yes	
NR 460.05(2) and (3)	Yes	Section NR 465.21(4) specifies the compliance dates.
NR 460.05(4)(a) and (b)	Yes	
NR 460.05(4)(c)	Yes	Only sources using an add-on control device to comply with the standard shall complete startup, shutdown and malfunction plans.
NR 460.05(5)	Yes	Applies only to sources using an add-on control device to comply with the standards.
NR 460.05(6)	No	Chapter NR 465 subch. III does not establish opacity standards and does not require COMS.
NR 460.05(7)	Yes	
NR 460.06(1)(a)	Yes	Applies to all affected sources. Additional requirements for performance testing are specified in s. NR 465.28(5) to (7).
NR 460.06(1)(b)	Yes	Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standards. Section NR 465.28(1) specifies the schedule for performance test requirements that are earlier than those specified in s. NR 460.06(1)(b).
NR 460.06(2) to (4)	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
NR 460.06(5)	Yes	Applies to all test methods except those used to determine capture system efficiency.
NR 460.06(6) and (7)	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard.
NR 460.07(1)(a) and (b)	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for monitoring are specified in s. NR 465.28(9).
NR 460.07(1)(c)	No	Chapter 465 subch. III does not have monitoring requirements for flares.
NR 460.07(2)	Yes	
NR 460.07(3)(a) to (c)	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for CMS operations and maintenance are specified in s. NR 465.28(9).
NR 460.07(3)(d)	No	Section NR 465.28(9) specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
NR 460.07(3)(e)	No	Chapter NR 465 subch. III does not have opacity or visible emission standards.
NR 460.07(3)(f)	No	Section NR 465.28(9) specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
NR 460.07(3)(g)	Yes	

Reference	Applies to Chapter NR 465 Subchapter III?	Comment
NR 460.07(3)(h)	No	Section NR 465.25(2) requires reporting of CMS out-of-control periods.
NR 460.07(4) and (5)	No	Chapter NR 465 subch. III does not require the use of continuous emissions monitoring systems.
NR 460.07(6)(a) to (d)	Yes	
NR 460.07(6)(e)	No	Chapter NR 465 subch. III does not require the use of continuous emissions monitoring systems.
NR 460.07(7)	No	Section NR 465.28(8) and (9) specify monitoring data reduction.
NR 460.08(1) to (4)	Yes	
NR 460.08(5)	Yes	Applies only to capture system and add-on control device performance tests at sources using these to comply with the standard.
NR 460.08(6)	No	Chapter NR 465 subch. III does not have opacity or visible emission standards.
NR 460.08(7)	No	Chapter NR 465 subch. III does not require the use of continuous emissions monitoring systems.
NR 460.08(8)	Yes	Section NR 465.25(1) specifies the dates for submitting the notification of compliance status.
NR 460.08(9) and (10)	Yes	
NR 460.09(1)	Yes	
NR 460.09(2)(a)	Yes	Additional requirements are specified in s. NR 465.25(3) and (4).
NR 460.09(2)(b)1. to 5.	Yes	Requirements for startup, shutdown and malfunction records only apply to add-on control devices used to comply with the standard.
NR 460.09(2)(b)6. to 12.	Yes	
NR 460.09(2)(b)13.	No	Chapter NR 465 subch. III does not require the use of continuous emissions monitoring systems.
NR 460.09(2)(b)14.	Yes	
NR 460.09(2)(c)	Yes	
NR 460.09(3)(a)1. to 3.	Yes	
NR 460.09(3)(a)4. and 5.	No	The same records are required in s. NR 465.25(2)(a)7.
NR 460.09(3)(a)6. to 10. and (b)	Yes	
NR 460.09(4)(a)	Yes	Additional requirements are specified in s. NR 465.25(2).
NR 460.09(4)(b)	Yes	Additional requirements are specified in s. NR 465.25(2)(b).
NR 460.09(4)(c)	No	Chapter NR 465 subch. III does not require opacity or visible emissions observations.
NR 460.09(4)(d)	Yes	
NR 460.09(4)(e)	Yes	Applies only to add-on control devices at sources using these to comply with the standard.
NR 460.09(5)(a) and (b)	No	Chapter NR 465 subch. III does not require the use of continuous emissions monitoring systems.
NR 460.09(5)(c)	No	Section NR 465.25(2)(b) specifies the contents of periodic compliance reports.
NR 460.09(5)(d)	No	Chapter 465 subch. III does not specify requirements for opacity or COMS
NR 460.09(6)	Yes	

Reference	Applies to Chapter NR 465 Subchapter III?	Comment
NR 460.10	No	Chapter 465 subch. III does not specify use of flares for compliance.
NR 484	Yes	

SECTION 4. NR 465(title) is amended to read:

CHAPTER NR 465

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR ~~WOOD FURNITURE MANUFACTURING OPERATIONS~~ GENERAL SURFACE COATING PROCESSES

SECTION 5. NR 465 Subchapter I (title) to follow NR 465 (title) and to precede NR 465.01 is created to read:

Subchapter I – Wood Furniture Manufacturing Operations

SECTION 6. NR 465.01(1)(a), (b), (c)(intro.), (d), (f) and Note and (2) and Note are amended to read:

NR 465.01(1)(a) This ~~chapter~~ subchapter applies to each facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source of hazardous air pollutants.

(b) An incidental wood furniture manufacturer shall maintain purchase or usage records demonstrating the source meets the criteria specified in s. NR 465.02(33), but the source is not subject to any other provisions of this ~~chapter~~ subchapter.

(c) A source that qualifies as an area source under this paragraph is not subject to any provisions of this ~~chapter~~ subchapter other than those in this paragraph. For subds. 1. and 2., finishing materials, adhesives, cleaning solvents and washoff solvents used for wood furniture or wood furniture component manufacturing operations shall account for at least 90% of annual HAP emissions at the plant site, and if the plant site has HAP emissions that do not originate from the listed materials, the owner or operator shall keep any records necessary to demonstrate that the 90% criterion is being met. A source that initially relies on the limits and criteria specified in subd. 1., 2. or 3. to become an area source, but subsequently exceeds the relevant limit, without first obtaining and complying with other limits that keep its potential to emit hazardous air pollutants below major source levels, becomes a major source and shall comply thereafter with all applicable provisions of this ~~chapter~~ subchapter starting on the applicable compliance date in s. NR 465.055. Nothing in this paragraph is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms. A source qualifies as an area source for the purposes of this ~~chapter~~ subchapter if the criteria in one of the following subdivisions are met:

(d) This ~~chapter~~ subchapter does not apply to research or laboratory equipment for which the primary purpose is to conduct research and development into new processes and products, where the equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

(f) Reconstructed affected sources are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the facility has been reconstructed, unless the control equipment is part of the process. Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this ~~chapter~~ subchapter are not considered reconstruction costs.

Note: An example of when control equipment is part of a process is where the equipment is used to recover product or raw material. An example of costs for equipment replacement which would not be considered reconstruction costs is the replacement of storage tanks, mix equipment and transfer lines to accommodate conversion to waterborne coatings where the purpose of the conversion is to comply with this ~~chapter~~ subchapter.

(2) PURPOSE. This ~~chapter~~ subchapter is adopted under ss. 285.27(2) and 285.65, Stats., to establish emission standards for hazardous air pollutants for wood furniture and wood furniture component manufacturing operations.

Note: This ~~chapter~~ subchapter is based on the federal regulations contained in 40 CFR part 63 Subpart JJ, created Dec. 7, 1995, as last revised on Dec. 28, 1998.

SECTION 7. NR 465.02(intro.), (1), (11), (41) and (42) are amended to read:

NR 465.02(intro.) For terms not defined in this section, the definitions contained in chs. NR 400 and 460 apply to the terms used in this ~~chapter~~ subchapter, with definitions in ch. NR 460 taking priority over definitions in ch. NR 400. If this section defines a term which is also defined in ch. NR 400 or 460, the definition in this section applies in this ~~chapter~~ subchapter. In this ~~chapter~~ subchapter:

(1) "Adhesive" means any chemical substance that is applied for the purpose of bonding 2 surfaces together other than by mechanical means. Products used on humans and animals, adhesive tape, contact paper or any other product with an adhesive incorporated onto or in an inert substrate are not considered adhesives under this ~~chapter~~ subchapter.

(11) "Coating" means a protective, decorative or functional film applied in a thin layer to a surface. Coating materials include paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, enamels, inks and temporary protective coatings. Adhesives and aerosol spray used for touch-up and repair are not considered coatings under this ~~chapter~~ subchapter.

(41) "VHAP" means any volatile hazardous air pollutant listed in Table 1 in this subchapter.

(42) "VHAP of potential concern" means any VHAP from the list in Table 5 in this subchapter.

SECTION 8. NR 465.03(intro.) is amended to read:

NR 465.03(intro.) The symbols used in this ~~chapter~~ subchapter have the following meanings:

SECTION 9. NR 465.04(1)(a) and (2)(a) are amended to read:

NR 465.04(1)(a) Limit VHAP emissions from finishing operations to no more than the emission limitations for existing sources presented in Table 2 in this subchapter, using any of the compliance methods in s. NR 465.06(1)(a). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in s. NR 465.05(12)(a)2. for determining styrene and formaldehyde usage.

(2)(a) Limit VHAP emissions from finishing operations to no more than the emission limitations for new sources presented in Table 2 in this subchapter using any of the compliance methods in s. NR 465.06(2)(a). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in s. NR 465.05(12)(a)2. for determining styrene and formaldehyde usage.

SECTION 10. NR 465.05(2)(intro.), (5)(intro.) and (12)(a)1., (b)2. and (d) are amended to read:

NR 465.05(2)(intro.) The owner or operator of an affected source shall train all personnel, including contract personnel, who are involved in finishing, gluing, cleaning or washoff operations, use of manufacturing equipment or implementation of the requirements of this ~~chapter~~ subchapter. Personnel hired on or after the compliance date of the standard shall be trained upon hiring. Personnel hired before the compliance date shall be trained within 6 months of the compliance date of the standard. All personnel shall be given refresher training annually. The owner or operator of an affected source shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, all of the following:

(5) The owner or operator of an affected source may not use solvents for cleaning or washoff operations that contain any of the pollutants listed in Table 3 in this subchapter in concentrations that require inclusion on an MSDS in accordance with the occupational safety and health administration hazard communication standard in 29 CFR part 1910 Subpart Z, incorporated by reference in s. NR 484.03(1).

(12)(a)1. Identifies VHAP from the list presented in Table 4 in this subchapter that are being used in finishing operations by the affected source.

(b)2. Usage of the VHAP is below the de minimis level presented in Table 4 in this subchapter for that VHAP. For sources using a control device to reduce emissions, an adjusted usage based on the overall control efficiency of the control system may be calculated and used to demonstrate that the source does not exceed the de minimis level in Table 4 in this subchapter.

(d) If, after November 1998, the owner or operator of an affected source uses a VHAP of potential concern listed in Table 5 in this subchapter for which a baseline level has not been previously established, the baseline level shall be established as the de minimis level provided in Table 5 in this subchapter for that chemical. The owner or operator shall track the annual usage of each VHAP of potential concern identified in this paragraph that is present in amounts that require inclusion on an MSDS in accordance with the occupational safety and health administration hazard communication standard in 29 CFR part 1910 Subpart Z, incorporated by reference in s. NR 484.03(1). If usage of the VHAP of potential concern exceeds the de minimis level listed in Table 5 in this subchapter for that chemical, the owner or operator shall provide an explanation to the department that documents the reason for exceedance of the de minimis level. If the explanation is not one of those listed in par. (b), the owner or operator shall follow the procedures in par. (c).

SECTION 11. NR 465.055(1) is amended to read:

NR 465.055(1) The compliance date for existing affected sources that emit less than 50 tons per year of HAP in 1996 is December 7, 1998. The compliance date for existing affected sources that emit 50 tons or more of hazardous air pollutants in

1996 is November 21, 1997. The owner or operator of an existing area source that increases its emissions of, or its potential to emit, HAP such that the source becomes a major source that is subject to this ~~chapter~~ subchapter shall comply with this ~~chapter~~ subchapter one year after becoming a major source.

SECTION 12. NR 465.07(1)(a), (b) and (c)1. and 2., (2)(a), (3) and (4) are amended to read:

NR 465.07(1)(a) If complying by using the methods in s. NR 465.06(1)(a)1. or (2)(a)1., submit the results of the averaging calculation using Equation 1 in s. NR 465.06(1)(a)1. for the first month with the initial compliance status report required by s. NR ~~465.11(2)~~ 465.105(2). The first month's calculation shall include data for the entire month in which the compliance date falls.

(b) If complying by using the methods s. NR 465.06(1)(a)2. or (2)(a)2., state in the initial compliance status report under s. NR ~~465.11(2)~~ 465.105(2) that compliant stains, washcoats, sealers, topcoats, basecoats, enamels and thinners, as applicable, are being used by the affected source.

(c)1. State in the initial compliance status report under s. NR ~~465.11(2)~~ 465.105(2) that compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, and compliant thinners are being used.

2. State in the initial compliance status report under s. NR ~~465.11(2)~~ 465.105(2) that compliant coatings, as determined by the VHAP content of the coating in the reservoir, are being used; the viscosity of the coating in the reservoir is being monitored; and compliant thinners are being used. The owner or operator shall also submit data that demonstrate that viscosity is an appropriate parameter for demonstrating compliance.

(2)(a) If complying by using the methods in s. NR 465.06(1)(b), (c)1. or (2)(b)1., state in the initial compliance status report under s. NR ~~465.11(2)~~ 465.105(2) that compliant contact adhesives are being used by the affected source.

(3) The owner or operator of an affected source subject to the provisions s. NR 465.04(1)(c) or (2)(c) shall demonstrate initial compliance by stating in the initial compliance status report under s. NR ~~465.11(2)~~ 465.105(2) that compliant strippable spray booth coatings are being used.

(4) The owner or operator of an affected source subject to the work practice standards in s. NR 465.05 shall demonstrate initial compliance by stating in the initial compliance status report under s. NR ~~465.11(2)~~ 465.105(2) that the work practice

implementation plan has been developed and procedures have been established for implementing the provisions of the plan.

SECTION 13. NR 465.08(1)(a), (b), (c)1. and 2., (d)(intro.), (2)(a) and (b)(intro.), (3) and (4) are amended to read:

NR 465.08(1)(a) If complying by using the methods in s. NR 465.06(1)(a)1. or (2)(a)1., submit the results of the averaging calculation using Equation 1 in s. NR 465.06(1)(a)1. for each month within that semiannual period, and submit a compliance certification in accord with s. NR ~~465.11(3)~~ 465.105(3) which states that the value of E, as calculated using Equation 1 in s. NR 465.06(1)(a)1., is no greater than 1.0 for existing sources or 0.8 for new sources. An affected source is in violation of the standard if the value of E is greater than 1.0 for existing sources or 0.8 for new sources for any month. A violation of the monthly average is a separate violation of the standard for each day of operation during the month, unless the affected source can demonstrate through records that the violation of the monthly average can be attributed to a particular day or days during the period.

(b) If complying by using the methods in s. NR 465.06(1)(a)2. or (2)(a)2., except as provided for in par.(c), submit a compliance certification in accord with s. NR ~~465.11(3)~~ 465.105(3) which states that compliant stains, washcoats, sealers, topcoats, basecoats, enamels and thinners, as applicable, have been used each day in the semiannual reporting period or shall otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as demonstrated by records or by a sample of the coating, is used.

(c)1. Use compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, use compliant thinners and submit a compliance certification in accord with s. NR ~~465.11(3)~~ 465.105(3) which states that compliant coatings have been used each day in the semiannual reporting period, or shall otherwise identify the days of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as determined by records or by a sample of the coating, is used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.

2. Use compliant coatings, as determined by the VHAP content of the coating in the reservoir, use compliant thinners, maintain a viscosity of the coating in the reservoir that is no less than the viscosity of the initial coating by monitoring the viscosity with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added, maintain records of solvent additions and submit a compliance certification with the semiannual report required

by s. NR ~~465.11(3)~~ 465.105(3). The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source and shall state that compliant coatings, as determined by the VHAP content of the coating in the reservoir, have been used each day in the semiannual reporting period. Additionally, the certification shall state that the viscosity of the coating in the reservoir has not been less than the viscosity of the initial coating, that is, the coating that is initially mixed and placed in the reservoir, for any day in the semiannual reporting period. An affected source is in violation of the standard when a sample of the as-applied coating exceeds the applicable limit established in s. NR 465.06(1)(a)2. or (2)(a)2., as determined using Method 311, in 40 CFR part 63, Appendix A, incorporated by reference in s. NR 438.04, or the viscosity of the coating in the reservoir is less than the viscosity of the initial coating.

(d)(intro.) If complying by using the methods in s. NR 465.06(1)(a)3. or (2)(a)3., install, calibrate, maintain and operate equipment according to manufacturer's specifications to monitor each site-specific operating parameter established in accordance with s. NR 465.07(2)(b)1. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by ss. NR ~~465.11(4)~~ 465.105(4) and 460.09(5). The appropriate monitoring equipment and related requirements include the following:

(2)(a) If complying by using the methods in s. NR 465.06(1)(b), (c)1. or (2)(b)1., submit a compliance certification in accord with s. NR ~~465.11(3)~~ 465.105(3) which states that compliant contact adhesives, including foam adhesives, have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant contact or foam adhesives were used. Each day a noncompliant contact or foam adhesive is used is a single violation of the standard.

(b) If complying by using the methods in s. NR 465.06(1)(c)2. or (2)(b)2., install, calibrate, maintain and operate equipment according to the manufacturer's specifications to monitor each site-specific operating parameter established in accordance with s. NR 465.07(2)(b)1. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by ss. NR ~~465.11(4)~~ 465.105(4) and 460.09(5). The appropriate monitoring equipment and related requirements include the following:

(3) The owner or operator of an affected source subject to the provisions s. NR 465.04(1)(c) or (2)(c) shall demonstrate continuous compliance by submitting a compliance certification in accord with s. NR ~~465.11(3)~~ 465.105(3) which states that compliant strippable spray booth coatings have been used each day in the semiannual reporting period, or otherwise identifies each day noncompliant materials were used. Each day a noncompliant strippable booth coating is used is a single violation of the

standard.

(4) The owner or operator of an affected source shall demonstrate continuous compliance with the work practice standards in s. NR 465.05 by submitting a compliance certification in accord with s. NR ~~465.11(3)~~ 465.105(3) which states that the work practice implementation plan is being followed, or otherwise identifies the provisions of the plan that have not been implemented and each day the provisions were not implemented. During any period of time that an owner or operator is required to implement the provisions of the plan, each failure to implement an obligation under the plan during any particular day is a violation.

SECTION 14. NR 465.10(6) to (9) are amended to read:

NR 465.10(6) The owner or operator of an affected source following the compliance method of s. NR 465.07(1)(d) or 465.08(1)(d) shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the value of E_{ac} required by Equation 2 in s. NR 465.06(1)(a)3. or Equation 4 in s. NR 465.06(2)(a)3., records of the operating parameter values, and copies of the semiannual compliance reports required by s. NR ~~465.11(4)~~ 465.105(4).

(7) The owner or operator of an affected source following the compliance method of s. NR 465.07(2)(b) or 465.08(2)(b) shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the applicable value of G_{ac} calculated using Equation 3 in s. NR 465.06(1)(c)2., records of the operating parameter values, and copies of the semiannual compliance reports required by s. NR ~~465.11(4)~~ 465.105(4).

(8) The owner or operator of an affected source subject to the emission limits in s. NR 465.04 and following the compliance provisions of s. NR 465.07(1)(a) to (c), (2)(a), (3) or (4) or 465.08(1)(a) to (c), (2)(a), (3) or (4) shall maintain records of the compliance certifications submitted in accordance with s. NR ~~465.11(3)~~ 465.105(3) for each semiannual period following the compliance date.

(9) The owner or operator of an affected source shall maintain records of all other information submitted with the compliance status report required by ss. NR 460.08(8) and ~~465.11(2)~~ 465.105(2) and the semiannual reports required by s. NR ~~465.11(3)~~ 465.105(3).

SECTION 15. NR 465.11 is renumbered NR 465.105 and NR 465.105(1), as renumbered, is amended to read:

NR 465.105 (1) The owner or operator of an affected source subject to this ~~chapter~~ subchapter shall fulfill all reporting requirements of ss. NR 460.06 to 460.09 according to the applicability criteria in s. NR 465.01(1)(e).

SECTION 16. NR 465 Subchapter III, to follow Table 5 of NR 465 Subchapter I, is created to read:

Subchapter III

Surface Coating of Large Appliances

NR 465.21 What this subchapter covers. (1) WHAT IS THE PURPOSE OF THIS SUBCHAPTER? This subchapter establishes national emission standards for hazardous air pollutants for large appliance surface coating facilities. This subchapter also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

Note: This subchapter is based on the federal regulations contained in 40 CFR part 63 Subpart NNNN, created July 23, 2002.

(2) AM I SUBJECT TO THIS SUBCHAPTER? (a) You are subject to this subchapter if you own or operate a facility that applies coatings to large appliance parts or products, and is a major source, is located at a major source or is part of a major source of emissions of hazardous air pollutants (HAP), except as provided in par. (d). A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 Mg (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year. You are not subject to this subchapter if your large appliance surface coating facility is located at, or is part of, an area source of HAP emissions. An area source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that is not a major source.

(b) The large appliance surface coating source category includes any facility engaged in the surface coating of a large appliance part or product. Large appliance parts and products include cooking equipment; refrigerators, freezers, and refrigerated cabinets and cases; laundry equipment; dishwashers, trash compactors, and water heaters; and heating, ventilation and air-conditioning (HVAC) units, air-conditioning units except those in motor vehicles, air-conditioning and heating combination units, comfort furnaces, and electric heat pumps. Specifically excluded are heat transfer coils and large commercial and industrial chillers.

(c) The large appliance surface coating activities and equipment to which this subchapter applies are all of the following:

1. Surface preparation of large appliance parts and products.

2. Preparation of a coating for application, e.g., mixing in thinners and other components.

3. Application of a coating to large appliance parts and products using, for example, spray guns or dip tanks.

4. Application of porcelain enamel, powder coating and asphalt interior soundproofing coating.

5. Flash-off, drying or curing following the coating application operation.

6. Cleaning of equipment used in coating operations, e.g., application equipment, hangers and racks.

7. Storage of coatings, thinners and cleaning materials.

8. Conveying of coatings, thinners and cleaning materials from storage areas to mixing areas or coating application areas, either manually such as in buckets or by automated means such as by transfer through pipes using pumps.

9. Handling and conveying of waste materials generated by coating operations.

(d) This subchapter does not apply to any of the following:

1. The surface coating of large appliance parts such as metal or plastic handles, hinges or fasteners that have a wider use beyond large appliances.

2. The surface coating of large appliances conducted for the purpose of repairing or maintaining large appliances used by a facility and not for commerce unless organic HAP emissions from the surface coating itself are as high as the rates specified in par. (a).

3. The surface coating of heat transfer coils or large commercial and industrial chillers.

4. Research or laboratory facilities; janitorial, building, and facility maintenance operations; hobby shops operated for noncommercial purposes or coating applications using hand-held non-refillable aerosol containers.

5. Processes involving metal plating or phosphating of a substrate.

(e) If you own or operate an affected source that is subject to this subchapter and at the same affected source you also perform surface coating subject to any other national emission standards for hazardous air pollutants (NESHAP), you may choose for the affected source to comply with only one NESHAP. In order to choose this alternative, the total mass of organic HAP emissions from all surface coating operations in the affected source shall be less than or equal to the total mass of organic HAP emissions that would result if it complied separately with all applicable NESHAP. You shall make this comparison for the initial compliance period and report it in the notification of compliance status as required in s. NR 465.25(1)(b)10. and in the notification of compliance status required by the other NESHAP. If you choose this alternative, your demonstration of compliance with the other NESHAP constitutes compliance with this subchapter.

(3) WHAT PARTS OF MY PLANT DOES THIS SUBCHAPTER COVER? (a) This subchapter applies to each new, reconstructed and existing affected source.

(b) The affected source is the collection of all of the following items that are part of the large appliance surface coating facility:

1. All coating operations as specified in sub. (2).

2. All storage containers and mixing vessels in which coatings, thinners and cleaning materials are stored or mixed.

3. All manual and automated equipment and containers used for conveying coatings, thinners and cleaning materials.

4. All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(c) An affected source is a new affected source if its construction commenced after July 23, 2002, and the construction is of a completely new large appliance surface coating facility where previously no large appliance surface coating facility had existed.

(d) An affected source is reconstructed if you meet the criteria as defined in s. NR 460.02(32).

(e) An affected source is existing if it is not new or reconstructed.

(4) WHEN DO I HAVE TO COMPLY WITH THIS SUBCHAPTER? (a) The date by which you shall comply with this subchapter is called the compliance date. The compliance date begins the initial compliance period during which you conduct the initial compliance demonstration described in ss. NR 465.26(1), 465.27(1) and 465.28(1). The compliance date for each type of affected source is as follows:

1. For a new or reconstructed affected source, the compliance date is one of the following as applicable:

a. If the initial startup of your new or reconstructed affected source is on or before July 23, 2002, the compliance date is July 23, 2002.

b. If the initial startup of your new or reconstructed affected source occurs after July 23, 2002, the compliance date is the date of initial startup of your affected source.

2. For an existing affected source, the compliance date is July 25, 2005.

3. For an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP emissions, the compliance date is one of the following as applicable:

a. For any portion of the source that becomes a new or reconstructed affected source subject to this subchapter, the compliance date is the date of initial startup of the affected source, or the date the area source becomes a major source, or July 23, 2002, whichever is latest.

b. For any portion of the source that becomes an existing affected source subject to this subchapter, the compliance date is the date one year after the area source becomes a major source or July 25, 2005, whichever is later.

(b) You shall meet the notification requirements in s. NR 465.25(1) according to the dates specified in s. NR 465.25(1) and in ch. NR 460. Some of the notifications shall be submitted before the compliance dates described in par. (a).

NR 465.22 What definitions apply to this subchapter? For terms not defined in this section, the definitions contained in chs. NR 400 and 460 apply to the terms in this subchapter, with definitions in ch. NR 460 taking priority over definitions in ch. NR 400. If this section defines a term which is also defined in ch. NR 400 or 460, the definition in this section applies in this subchapter. In this subchapter:

(1) "Add-on control device" means an air pollution control device, such as a thermal oxidizer or carbon absorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

(2) "Adhesive" means any chemical substance that is applied for the purpose of bonding 2 surfaces together.

(3) "Capture efficiency" or "capture system efficiency" means the portion, expressed as a percentage, of the pollutants from an emission source that is delivered to an add-on control device.

(4) "Capture system" means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings and cleaning materials, both at the point of application and at subsequent points where emissions from the coatings and cleaning materials occur, such as flashoff, drying or curing. As used in this subchapter, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

(5) "Cleaning material" means a solvent used to remove contaminants and other materials such as dirt, grease, oil, and dried or wet coating from a substrate before or after coating application, or from equipment associated with a coating operation such as spray booths, spray guns, racks, tanks and hangers. Solvents used to clean substrates or equipment or both are included.

(6) "Coating" means a material applied to a substrate for decorative, protective or functional purposes. For the purposes of this subchapter, coatings include paints, porcelain enamels, sealants, caulks, inks, adhesives, and maskants. Decorative, protective or functional materials that consist only of protective oils, acids, bases or any combination of these substances are not considered coatings for the purposes of this subchapter.

(7) "Coating operation" means equipment used to apply cleaning materials to a substrate to prepare it for coating application or to remove dried coating, to apply coating to a substrate and to dry or cure the coating after application, or to clean coating operation equipment. A single coating operation may include any combination of these types of equipment but always includes at least the point at which a coating or cleaning material is applied and all subsequent points in the affected source where organic HAP emissions from that coating or cleaning material occur. There may be multiple coating operations in an affected source. Applications of coatings using hand-held, nonrefillable aerosol containers, touchup markers, or marking pens are not coating operations for the purposes of this subchapter.

(8) "Coating solids" means the nonvolatile portion of the coating that makes up the dry film.

(9) "Continuous parameter monitoring system" or "CPMS" means the total equipment that may be required to meet the data acquisition and availability requirements of this subchapter used to sample, condition (if applicable), analyze, and provide a record of coating operation, capture system, or add-on control device parameters.

(10) "Controlled coating operation" means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

(11) "Deviation" means any instance in which an affected source subject to this subchapter or an owner or operator of such a source fails to meet any of the following:

(a) Any requirement or obligation established by this subchapter including any emission limit, operating limit or work practice standard.

(b) Any term or condition that is adopted to implement an applicable requirement in this subchapter and that is included in the operating permit for any affected source required to obtain such a permit.

(c) Any emission limit, operating limit or work practice standard in this subchapter during startup, shutdown or malfunction regardless of whether or not the failure is permitted by this subchapter.

(12) "Emission limitation" means an emission limit, operating limit, or work practice standard.

(13) “Enclosure” means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

(14) “Exempt compound” means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in s. NR 400.02(162).

(15) “Facility maintenance” means the routine repair or refurbishing, including surface coating, of the tools, equipment, machinery and structures that comprise the infrastructure of the facility or that are necessary for the facility to function in its intended capacity. Facility maintenance does not mean cleaning of equipment that is part of a large appliances coating operation.

(16) “Heat transfer coil” means a tube-and-fin assembly used in large appliance products to remove heat from a circulating fluid.

(17) “Initial startup” means the first time equipment is brought online in a facility.

(18) “Large appliance part” means a component of a large appliance product except for the wider use parts excluded under s. NR 465.21(2)(d)1.

(19) “Large appliance product” means, but is not limited to, any of the following products, except as provided under s. NR 465.21(2)(d)3., manufactured for household, recreational, institutional, commercial or industrial use:

(a) Cooking equipment, including ovens, ranges and microwave ovens, but not including toasters, counter-top grills and similar small products.

(b) Refrigerators, freezers and refrigerated cabinets and cases.

(c) Laundry equipment, including washers, dryers, drycleaning machines and pressing machines.

(d) Dishwashers, trash compactors and water heaters.

(e) HVAC units, air-conditioning units except those in motor vehicles, air-conditioning and heating combination units, comfort furnaces and electric heat pumps. Specifically excluded are heat transfer coils and large commercial and industrial chillers.

(20) “Large commercial and industrial chillers” means, for the purposes of this subchapter, equipment designed to produce chilled water for use in commercial or industrial HVAC systems.

(21) “Manufacturer's formulation data” means data on a material, such as a coating, that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material using the test methods specified in s. NR 465.26(2). Manufacturer's formulation data may include information on density, organic

HAP content, volatile organic matter content and coating solids content.

(22) “Mass fraction of organic HAP” means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg organic HAP per kg of material.

(23) “Month” means a calendar month or a pre-specified period of 28 to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

(24) “Organic HAP content” means the mass of organic HAP per volume of coating solids for a coating, calculated using Equation 2 in s. NR 465.26(2). The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt.

(25) “Permanent total enclosure” or “PTE” means a permanently installed enclosure that meets the criteria of Method 204 in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), for a PTE and that directs all the exhaust gases from the enclosure to an add-on control device.

(26) “Protective oil” means an organic material that is applied to a substrate for the purpose of providing lubrication or protection from corrosion without forming a solid film. Protective oil includes lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

(27) “Research or laboratory facility” means a facility whose primary purpose is for research and development of new processes and products conducted under the close supervision of technically trained personnel and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

(28) “Surface preparation” means use of a cleaning material on a portion of or all of a substrate including use of cleaning material to remove dried coating which is sometimes called depainting.

(29) “Temporary total enclosure” means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source as defined in Method 204 in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9).

(30) “Thinner” means an organic solvent that is added to a coating after the coating is received from the supplier.

(31) “Total volatile hydrocarbon” or “TVH” means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A to 204F in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-

VOC.

(32) “Uncontrolled coating operation” means a coating operation from which no organic HAP emissions are routed through an emission capture system and add-on control device.

(33) “Volatile organic compound” or “VOC” means any compound defined as VOC in s. NR 400.02(162).

(34) “Volume fraction of coating solids” means the ratio of the volume of coating solids (also known as volume of nonvolatiles) to the volume of coating, expressed as liters of coating solids per liter of coating.

(35) “Wastewater” means water that is generated in a coating operation and is collected, stored or treated prior to being discarded or discharged.

(36) “You” or “your” means the owner or operator of a facility that applies coatings to large appliance parts or products.

NR 465.23 Emission limitations. (1) WHAT EMISSION LIMITS MUST I MEET? (a) For an existing affected source, you shall limit organic HAP emissions to the atmosphere to no more than 0.13 kg/liter (1.1 lb/gal) of coating solids used during each compliance period.

(b) For a new or reconstructed affected source, you shall limit organic HAP emissions to the atmosphere to no more than 0.022 kg/liter (0.18 lb/gal) of coating solids used during each compliance period.

(2) WHAT ARE MY OPTIONS FOR MEETING THE EMISSION LIMITS? You shall include all coatings, thinners and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in sub. (1). To make this determination, you shall use at least one of the 3 compliance options listed in pars. (a) to (c). You may apply any of the compliance options to an individual coating operation or to multiple coating operations as a group or to the entire affected source. You may use different compliance options for different coating operations or at different times on the same coating operation. However, you may not use different compliance options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you shall document this switch as required by s. NR 465.25(3)(c), and you shall report it in the next semiannual compliance report required in s. NR 465.25(2). The compliance options and requirements are as follows:

(a) *Compliant material option*. Demonstrate that the organic HAP content of each coating used in the coating operation or operations is less than or equal to the applicable emission limit in sub. (1), and that each thinner and each cleaning material used contains no organic HAP. You shall meet all the requirements of s. NR 465.26(1) to (3) to demonstrate compliance with the emission limit using this option.

(b) *Emission rate without add-on controls option*. Demonstrate that, based on data on the coatings, thinners and cleaning materials used in the coating operation or operations, the organic HAP emission rate for the coating operation or operations is less than or equal to the applicable emission limit in sub. (1). You shall meet all the requirements of s. NR 465.27(1) to (3) to demonstrate compliance with the emission limit using this option.

(c) *Emission rate with add-on controls option*. Demonstrate that, based on data on the coatings, thinners and cleaning materials used in the coating operation or operations and the emission reductions achieved by emission capture and add-on controls, the organic HAP emission rate for the coating operation or operations is less than or equal to the applicable emission limit in sub. (1). If you use this compliance option, you shall also demonstrate that all emission capture systems and add-on control devices for the coating operation or operations meet the operating limits required in sub. (3), except for solvent recovery systems for which you conduct liquid-liquid material balances according to s. NR 465.28(2)(g), and that you meet the work practice standards required in sub. (4). You shall meet all the requirements of s. NR 465.28(1) to (9) to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

(3) WHAT OPERATING LIMITS MUST I MEET? (a) For any coating operation on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating operation or operations on which you use the emission rate with add-on controls option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to s. NR 465.28(2)(g), you shall meet the operating limits specified in Table 1 of this subchapter. These operating limits apply to the emission capture and control systems on the coating operation or operations for which you use this option, and you shall establish the operating limits during the performance test according to the requirements in s. NR 465.28(8). You shall meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 1 of this subchapter, or wish to monitor an alternative parameter and comply with a different operating limit, you shall apply to the U.S. environmental protection agency (EPA) administrator for approval of alternative monitoring under s. NR 460.07(6).

(4) WHAT WORK PRACTICE STANDARDS MUST I MEET? (a) For any coating operation on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any work practice standards.

(b) If you use the emission rate with add-on controls option, you shall develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners, and cleaning materials used in, and waste materials generated by, the coating operation or operations for which you use this option; or you shall meet an alternative standard as provided in par. (c). The plan shall specify practices and procedures to ensure that, at a minimum, all of the following elements are implemented:

1. All organic-HAP-containing coatings, thinners, cleaning materials and waste materials shall be stored in closed containers.

2. Spills of organic-HAP-containing coatings, thinners, cleaning materials and waste materials shall be minimized.

3. Organic-HAP-containing coatings, thinners, cleaning materials and waste materials shall be conveyed from one location to another in closed containers or pipes.

4. Mixing vessels which contain organic-HAP-containing coatings and other materials shall be closed except when you are adding to, removing or mixing the contents.

5. Emissions of organic HAP shall be minimized during cleaning of storage, mixing and conveying equipment.

(c) As provided in 40 CFR 63.6(g), the administrator may choose to grant you permission to use an alternative to the work practice standards in this subsection.

NR 465.24 General compliance requirements. (1) WHAT ARE MY GENERAL REQUIREMENTS FOR COMPLYING WITH THIS SUBCHAPTER? (a) You shall be in compliance with the emission limitations in this subchapter according to both of the following requirements:

1. Any coating operation or operations for which you use the compliant material option or the emission rate without add-on controls option, as specified in s. NR 465.23(2)(a) and (b), shall be in compliance with the applicable emission limit in s. NR 465.23(1) at all times.

2. Any coating operation or operations for which you use the emission rate with add-on controls option, as specified in

s. NR 465.23(2)(c), shall be in compliance with the applicable emission limit in s. NR 465.23(1) and the work practice standards in s. NR 465.23(4) at all times. Each controlled coating operation shall be in compliance with the operating limits for emission capture systems and add-on control devices required by s. NR 465.23(3) at all times, except for solvent recovery systems for which you conduct liquid-liquid material balances according to s. NR 465.28(2)(g).

(b) You shall always operate and maintain your affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subchapter, according to the provisions in s. NR 460.05(4)(a)1.

(c) If your affected source uses an emission capture system and add-on control device, you shall maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date specified for your affected source in s. NR 465.21(4) and the date when the initial emission capture system and add-on control device performance tests have been completed as specified in s. NR 465.28(1). This requirement does not apply to a solvent recovery system for which you conduct a liquid-liquid material balance according to s. NR 465.28(2)(g) in lieu of conducting performance tests.

(d) If your affected source uses an emission capture system and add-on control device, you shall develop and implement a written startup, shutdown and malfunction plan according to the provisions in s. NR 460.05(4)(c). The plan shall address the startup, shutdown and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan shall also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

(2) WHAT PARTS OF THE GENERAL PROVISIONS APPLY TO ME? General provisions of ch. NR 460 apply to an owner or operator of a facility subject to this subchapter as indicated in ch. NR 460 Appendix NNNN.

NR 465.25 Notifications, reports and records. (1) WHAT NOTIFICATIONS MUST I SUBMIT? (a) You shall submit notifications according to ss. NR 460.06(2), 460.07(6)(c) and 460.08(2) to (5) and (8), except as follows:

1. You shall submit the initial notification required by s. NR 460.08(2) for an existing affected source no later than July 23, 2003. For a new or reconstructed affected source, you shall submit the initial notification no later than 120 days after initial startup or November 20, 2002, whichever is later.

2. You shall submit the notification of compliance status required by s. NR 460.08(8) no later than 30 calendar days

following the end of the initial compliance period described in s. NR 465.26(1), 465.27(1) or 465.28(1) that applies to your affected source.

(b) The notification of compliance status shall contain all of the following information, and the applicable information specified in s. NR 460.08(8):

1. Company name and address.

2. A statement by a responsible official with that official's name, title and signature certifying the truth, accuracy and completeness of the content of the report.

3. The date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in s. NR 465.26(1), 465.27(1) or 465.28(1) that applies to your affected source.

4. Identification of the compliance option or options specified in s. NR 465.23(2) that you used on each coating operation in the affected source during the initial compliance period.

5. A statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

6. If you had a deviation, all of the following information:

a. A description and statement of the cause of the deviation.

b. If you failed to meet the applicable emission limit in s. NR 465.23(1), all the calculations you used to determine the kg organic HAP emitted per liter of coating solids used. You do not need to submit information provided by the materials suppliers or manufacturers or test reports.

7. For each of the data items listed in this subdivision that is required by the compliance option or options you used to demonstrate compliance with the emission limit, an example of how you determined the value, including calculations and supporting data. Supporting data can include a copy of the information provided by the supplier or manufacturer of the example coating or material or a summary of the results of testing conducted according to s. NR 465.26(2)(a), (b) or (c). You do not need to submit copies of any test reports. The data items are as follows:

a. Mass fraction of organic HAP for one coating, for one thinner, and for one cleaning material.

b. Volume fraction of coating solids for one coating.

c. Density for one coating, one thinner, and one cleaning material except that if you use the compliant material option, only the example coating density is required.

d. The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 1 of s. NR 465.27(2).

8. The determination of kg organic HAP emitted per liter of coating solids used for the compliance option or options you use, as follows:

a. For the compliant material option, an example determination of the organic HAP content for one coating, according to s. NR 465.26(2).

b. For the emission rate without add-on controls option, the calculation of the total mass of organic HAP emissions, the calculation of the total volume of coating solids used and the calculation of the organic HAP emission rate, using Equations 1 and 1A to 1C, 2 and 3, respectively, of s. NR 465.27(2).

c. For the emission rate with add-on controls option, the calculation of the total mass of organic HAP emissions for the coatings, thinners and cleaning materials used using Equations 1 and 1A to 1C of s. NR 465.27(2), the calculation of the total volume of coating solids used using Equation 2 of s. NR 465.27(2), the calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices using Equations 1 and 1A to 1C, 2 and 3 and 3A to 3C of s. NR 465.28(2), as applicable, and the calculation of the organic HAP emission rate using Equation 4 of s. NR 465.28(2).

9. For the emission rate with add-on controls option, the following information, except that the information in subd. 9.a. to c. does not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to s. NR 465.28(2)(g):

a. For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you shall also include the statistical calculations to show you meet the DQO or LCL criteria in 40 CFR part 63, subpart KK, Appendix A, incorporated by reference in s. NR 484.04(24). You do not need to submit complete test reports.

b. A summary of the results of each add-on control device performance test. You do not need to submit complete test reports.

c. A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.

d. A statement of whether or not you developed and implemented the work practice plan required by s. NR 465.23(4).

e. A statement of whether or not you developed and implemented the startup, shutdown and malfunction plan required by s. NR 465.24(1)(d).

10. If you have chosen for your affected source to comply with the requirements of another NESHAP in lieu of the requirements of this subchapter, as allowed in s. NR 465.21(2)(d), a statement certifying your intent, as well as documentation and supporting materials showing that during the initial compliance period your affected source's total organic HAP emissions were equal to or less than the organic HAP emissions that would have resulted from complying separately with each applicable NESHAP.

(2) WHAT REPORTS MUST I SUBMIT? You shall submit semiannual compliance reports for each affected source according to the requirements of this subsection. The semiannual compliance reporting requirements of this subsection may be satisfied by other required reports, as specified in par. (a)5. The semiannual compliance report content and submittal requirements are as follows:

(a) Unless the department has approved a different schedule for submission of reports under s. NR 460.09(1), you shall prepare and submit each semiannual compliance report according to the following dates and requirements:

1. The first semiannual compliance report shall cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in s. NR 465.26(1), 465.27(1) or 465.28(1) that applies to your affected source and ends on June 30 or December 31, whichever date is the first date following the end of the initial compliance period.

2. Each subsequent semiannual compliance report shall cover the subsequent semiannual reporting period from January 1 to June 30 or the semiannual reporting period from July 1 to December 31.

3. Each semiannual compliance report shall be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

4. For each affected source subject to ch. NR 407, you may submit compliance reports according to the dates established in a permit issued under ch. NR 407 instead of according to the dates specified in subd. 3.

5. Each affected source that has obtained a title V operating permit pursuant to ch. NR 407 shall report all deviations as

defined in this subchapter in the semiannual monitoring report required by s. NR 407.09(1)(c)3.a. If an affected source submits a semiannual compliance report pursuant to this subsection along with, or as part of, the semiannual monitoring report required by s. NR 407.09(1)(c)3.a., and the semiannual compliance report includes all required information concerning deviations from any emission limitation in this subchapter, its submission shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report may not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the department.

(b) The semiannual compliance report shall contain all of the following information in addition to the information specified in pars. (c) to (j) that is applicable to your affected source:

1. Company name and address.

2. Statement by a responsible official with that official's name, title, and signature certifying the truth, accuracy and completeness of the content of the report.

3. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31.

4. Identification of the compliance option or options specified in s. NR 465.23(2) that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you shall report the beginning and ending dates you used each option.

(c) If there were no deviations from the emission limitations in s. NR 465.23(1), (3) and (4) that apply to you, the semiannual compliance report shall include a statement that there were no deviations from the emission limitations during the reporting period.

(d) If you use the compliant material option and there was a deviation from the applicable emission limit in s. NR 465.23(1), the semiannual compliance report shall contain all of the following information:

1. Identification of each coating used that deviated from the emission limit, each thinner and cleaning material used that contained organic HAP, and the dates and time periods each was used.

2. The determination of the organic HAP content, according to s. NR 465.26(2)(d), for each coating identified in subd. 1. You do not need to submit background data supporting this calculation, for example, information provided by coating suppliers or manufacturers or test reports.

3. The determination of mass fraction of organic HAP for each thinner and cleaning material identified in subd. 1. You do not need to submit background data supporting this calculation, for example, information provided by material suppliers or manufacturers or test reports.

4. A statement of the cause of each deviation.

(e) If you use the emission rate without add-on controls option and there was a deviation from the applicable emission limit in s. NR 465.23(1), the semiannual compliance report shall contain all of the following information:

1. The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the emission limit.

2. The calculations used to determine the organic HAP emission rate for the compliance period in which the deviation occurred. You shall provide the calculations for Equations 1 and 1A to 1C, 2 and 3 in s. NR 465.27(2), and if applicable, the calculation used to determine the organic HAP in waste materials according to s. NR 465.27(2)(e)4. You do not need to submit background data supporting these calculations, for example, information provided by materials suppliers or manufacturers or test reports.

3. A statement of the cause of each deviation.

(f) If you use the emission rate with add-on controls option and there were no periods during which the continuous parameter monitoring systems were out-of-control as specified in s. NR 460.07(3)(g), the semiannual compliance report shall include a statement that there were no periods during which the CPMS were out-of-control during the reporting period.

(g) If you use the emission rate with add-on controls option and there was a deviation from an emission limitation, including during periods of startup, shutdown and malfunction, and including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere, the semiannual compliance report shall contain all of the following information:

1. The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the applicable emission limit in s. NR 465.23(1).

2. The calculations used to determine the organic HAP emission rate for each compliance period in which a deviation occurred. You shall provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and cleaning materials used during the compliance period using Equations 1, 1A to 1C and 2 of s. NR 465.27(2) and, if applicable, the

calculation used to determine the mass of organic HAP in waste materials according to s. NR 465.27(2)(e)4.; the calculation of the total volume of coating solids used during the compliance period using Equation 2 of s. NR 465.27(2); the calculation of the mass of organic HAP emission reduction during the compliance period by emission capture systems and add-on control devices, using Equations 1, 1A to 1C, 2, 3 and 3A to 3C of s. NR 465.28(2); and the calculation of the organic HAP emission rate, using Equation 4 of s. NR 465.28(2). You do not need to submit the background data supporting these calculations, for example, information provided by materials suppliers or manufacturers or test reports.

3. The date and time that each malfunction started and stopped.

4. A brief description of the CPMS.

5. The date of the latest CPMS certification or audit.

6. The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks.

7. The date, time and duration that each CPMS was out-of-control, including the information in s. NR 460.07(3)(h).

8. The date and time period of each deviation from an operating limit in Table 1 of this subchapter, the date and time period of any bypass of the add-on control device, and whether each deviation occurred during a period of startup, shutdown or malfunction or during another period.

9. A summary of the total duration of each deviation from an operating limit in Table 1 of this subchapter and bypass of the add-on control device during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.

10. A breakdown of the total duration of the deviations from the operating limits in Table 1 of this subchapter and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes and other unknown causes.

11. A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.

12. A description of any changes in the CPMS, coating operation, emission capture system or add-on control device since the last semiannual reporting period.

13. For each deviation from the work practice standards, a description of the deviation, the date and time period of the deviation and the actions you took to correct the deviation.

14. A statement of the cause of each deviation.

(h) If you use the emission rate with add-on controls option, you shall submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in s. NR 460.09(4)(b).

(j) If you use the emission rate with add-on controls option and you have a startup, shutdown or malfunction during the semiannual reporting period, you shall submit the following reports as applicable:

1. If your actions were consistent with your startup, shutdown and malfunction plan (SSMP), you shall include the information specified in s. NR 460.09(4)(e) in the semiannual compliance report required by par. (a).

2. If your actions were not consistent with your SSMP, you shall submit an immediate startup, shutdown and malfunction report as follows:

a. You shall describe the actions taken during the event in a report delivered by facsimile, telephone or other means to the department within 2 working days after starting actions that are inconsistent with the plan.

b. You shall submit a letter to the department within 7 working days after the end of the event, unless you have made alternative arrangements with the department as specified in s. NR 460.09(4)(e)3. The letter shall contain the information specified in s. NR 460.09(4)(e)2.

(3) WHAT RECORDS MUST I KEEP? You shall collect and keep records of the data and information specified in this subsection. Failure to collect and keep these records is a deviation from the applicable standard. The data and information are as follows:

(a) Each notification and report that you submitted to comply with this subchapter and the documentation supporting each notification and report.

(b) Information provided by materials suppliers or manufacturers such as manufacturer's formulation data or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and cleaning material and the volume fraction of coating solids for each coating. If you conducted testing to determine mass fraction of organic HAP, density or volume fraction of coating solids, a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, the summary sheet of results provided to you by the manufacturer or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

(c) For each compliance period, the time periods (beginning and ending dates and times) and the coating operations at which each compliance option was used and all determinations of kg organic HAP per liter of coating solids for the compliance option or options you used, as follows:

1. For the compliant material option, the determination of the organic HAP content for each coating, according to s. NR 465.26(2)(d).

2. For the emission rate without add-on controls option, the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1 and 1A to 1C of s. NR 465.27(2) and, if applicable, the calculations used to determine the mass of organic HAP in waste materials according to s. NR 465.27(2)(e)4.; the calculation of the total volume of coating solids used each month, using Equation 2 of s. NR 465.27(2); and the calculation of the organic HAP emission rate, using Equation 3 of s. NR 465.27(2).

3. For the emission rate with add-on controls option, the calculation of the total mass of organic HAP emissions for the coatings, thinners and cleaning materials used each month, using Equations 1 and 1A to 1C of s. NR 465.27(2) and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to s. NR 465.27(2)(e)4.; the calculation of the total volume of coating solids used each month, using Equation 2 of s. NR 465.27(2); the calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices, using Equations 1, 1A to 1C, 2, 3 and 3A to 3C of s. NR 465.28(2), as applicable; and the calculation of the organic HAP emission rate, using Equation 4 of s. NR 465.28(2).

(d) The name and volume of each coating, thinner and cleaning material used during each compliance period.

(e) The mass fraction of organic HAP for each coating, thinner and cleaning material used during each compliance period.

(f) The volume fraction of coating solids for each coating used during each compliance period except for zero-HAP coatings for which volume solids determination is not required as allowed in s. NR 465.26(2)(a).

(g) The density for each coating used during each compliance period except for zero-HAP coatings for which volume solids determination is not required as allowed in s. NR 465.26(2)(a) and, if you use either the emission rate without add-on controls or the emission rate with add-on controls compliance option, the density for each thinner and cleaning material used during each compliance period.

(h) If you use an allowance in Equation 1 of s. NR 465.27(2) for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage and disposal facility (TSDF) according to s. NR 465.27(2)(e)4., all of the following information:

1. The name and address of each TSDF to which you sent waste materials for which you use an allowance in Equation 1 of s. NR 465.27(2), a statement of which subparts under 40 CFR parts 262, 264, 265 and 266 apply to the facility, and the date of each shipment.

2. Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of s. NR 465.27(2).

3. The methodology used in accordance with s. NR 465.27(2)(e)4. to determine the total amount of waste materials sent to, or the amount collected, stored and designated for transport to, a TSDF each month, and the methodology to determine the mass of organic HAP contained in these waste materials. This shall include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(j) The date, time and duration of each deviation.

(k) If you use the emission rate with add-on controls option, all of the following:

1. For each deviation, whether the deviation occurred during a period of startup, shutdown or malfunction.

2. The records in s. NR 460.05(4)(c)3. to 5. related to startup, shutdown and malfunction.

3. The records required to show continuous compliance with each operating limit specified in Table 1 of this subchapter that applies to you.

4. For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), for a PTE and has a capture efficiency of 100%, as specified in s. NR 465.28(6)(a).

5. For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in s. NR 465.28(5) and (6)(b) to (e), including the following as applicable:

a. For a liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure, the mass of total volatile hydrocarbon (TVH) as measured by Method 204A or 204F in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), for each material used in the coating operation, and the total TVH for all materials used during each capture efficiency test run, including a copy of the test report. Also the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or 204E in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), including a copy of the test report, and documentation that the enclosure used for the capture efficiency test met the criteria in Method 204 in 40 CFR part 51, Appendix M, for either a temporary total enclosure or a building enclosure.

b. For a gas-to-gas protocol using a temporary total enclosure or a building enclosure, the mass of TVH emissions captured by the emission capture system as measured by Method 204B or 204C in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), at the inlet to the add-on control device, including a copy of the test report. Also, the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or E in 40 CFR part 51, Appendix M, including a copy of the test report, and documention that the enclosure used for the capture efficiency test met the criteria in Method 204 in 40 CFR part 51, Appendix M, for either a temporary total enclosure or a building enclosure.

c. For an alternative protocol, documentation of a capture efficiency determination using an alternative method or protocol as specified in s. NR 465.28(6)(e), if applicable.

6. For each add-on control device organic HAP destruction or removal efficiency determination as specified in s. NR 465.28(7), all of the following:

a. Each add-on control device performance test conducted according to s. NR 465.28(5) and (7).

b. The coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.

8. The data and calculations you used to establish the emission capture and add-on control device operating limits as specified in s. NR 465.28(8), and to document compliance with the operating limits as specified in Table 1 of this subchapter.

9. The work practice plan required by s. NR 465.23(4), and documentation that you are implementing the plan on a continuous basis.

(4) IN WHAT FORM AND FOR HOW LONG MUST I KEEP MY RECORDS? (a) Your records shall be in a form suitable and readily available for expeditious review, according to s. NR 460.09(2)(a). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(b) As specified in s. NR 460.09(2)(a), you shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record.

(c) You shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report or record, according to s. NR 460.09(2)(a). You may keep the records off site for the remaining 3 years.

NR 465.26 Compliance requirements for the compliant material option. (1) BY WHAT DATE MUST I CONDUCT THE INITIAL COMPLIANCE DEMONSTRATION? You shall complete the initial compliance demonstration for the initial compliance period according to the requirements in sub. (2). The initial compliance period begins on the applicable compliance date specified in s. NR 465.21(4) and ends on the last day of the first full month after the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next month. The initial compliance demonstration includes the determination according to sub. (2) and supporting documentation showing that, during the initial compliance period, you used no coating with an organic HAP content that exceeded the applicable emission limit in s. NR 465.23(1), and that you used no thinners or cleaning materials that contained organic HAP.

(2) HOW DO I DEMONSTRATE INITIAL COMPLIANCE WITH THE EMISSION LIMITATIONS? You may use the compliant material option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You shall use either the emission rate without add-on controls option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations may not use any coating with an organic HAP content that exceeds the applicable emission limit in s. NR 465.23(1) and may not use any thinner or cleaning material that contains organic HAP, as determined according to this section during the initial compliance period. Any coating operation or operations for which you use the compliant material option is not required to meet the operating limits or work practice standards required in s. NR 465.23(3) and (4), respectively. To demonstrate initial compliance with the emission limitations using the compliant material option, you shall meet all the requirements of this subsection for the coating operation or operations using this option. You shall use the procedures in this subsection on each coating, thinner and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the HAP content of coatings, thinners or cleaning materials that have been reclaimed onsite and reused in

the coating operation or operations for which you use the compliant material option, provided these materials, in their condition as received, were demonstrated to comply with the compliant material option. You shall comply with the following requirements and procedures except that if the mass fraction of organic HAP of a coating equals zero, determined according to par. (a), and you use the compliant material option, you are not required to comply with pars. (b) and (c) for that coating:

(a) Determine the mass fraction of organic HAP for each coating, thinner and cleaning material used during the compliance period according to one of the following options:

1. Use Method 311 in 40 CFR part 63, Appendix A, incorporated by reference in s. NR 484.04(24). You shall use the following procedures when performing a Method 311 test:

a. Count each organic HAP that is measured to be present at 0.1% by mass or more for Occupational Safety and Health Administration (OSHA) defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0% by mass or more for other organic HAP compounds.

Note: For example, if toluene, not an OSHA carcinogen, is measured to be 0.5% of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to 4 places after the decimal point (for example, 0.3791).

b. Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to 3 places after the decimal point.

2. Use Method 24 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), for coatings to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP.

3. Use an alternative test method once the administrator has approved it. You shall follow the procedure in s. NR 460.06(5) to submit an alternative test method for approval.

4. Use information other than that generated by the test methods specified in subds. 1. to 3., such as manufacturer's formulation data, if they represent each organic HAP that is present at 0.1% by mass or more for OSHA defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0% by mass or more for other organic HAP compounds. If there is a disagreement between information relied on under this subdivision and results of a test conducted according to subds. 1. to 3., the test method results will take precedence.

5. When test data and manufacturer's data for solvent blends are not available, use the default values for mass fraction of

organic HAP for these solvent blends listed in Table 3 or 4 of this subchapter. You shall use the values in Table 3 of this subchapter for all solvent blends that match Table 3 entries, and you may only use Table 4 of this subchapter if the solvent blends in the materials you use do not match any of the solvent blends in Table 3 of this subchapter, and you only know whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed in Table 3 or 4 of this subchapter, the Method 311 results will take precedence. Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which shall be counted toward the total organic HAP mass fraction of the materials.

(b) Determine the volume fraction of coating solids (liters of coating solids per liter of coating) for each coating used during the compliance period according to one of the following options:

1. Use ASTM Method D2697-86 (1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings", or ASTM Methods D6093-97, "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer", incorporated by reference in s. NR 484.10(39e) and (55m), respectively, to determine the volume percent of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.

2. Obtain the volume fraction of coating solids for each coating from the supplier or manufacturer of the material.

3. If the volume fraction of coating solids cannot be determined using the options in subd. 1. or 2., use the following equation:

$$V_s = 1 - \frac{m_{volatiles}}{D_{avg}} \qquad \text{(Equation 1)}$$

where:

V_s is the volume fraction of coating solids, liters coating solids per liter coating

$m_{volatiles}$ is the total volatile matter content of the coating, including HAP, volatile organic compounds (VOC), water and compounds excluded from the VOC definition in s. NR 400.02, determined according to Method 24 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), grams volatile matter per liter coating

D_{avg} is the average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475-98, "Standard Test Method for Density of Liquid Coatings, Inks and Related

Products", incorporated by reference in s. NR 484.10(22), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475-98 test results and other information sources, the test results will take precedence.

(c) Determine the density of each coating used during the compliance period from test results using ASTM Method D1475-98, "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products", incorporated by reference in s. NR 484.10(22), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475-98 test results and other information sources, the test results will take precedence.

(d) Determine the organic HAP content, kg organic HAP per liter coating solids, of each coating used during the compliance period using the following equation, except that if the mass fraction of organic HAP equals zero, then the organic HAP content also equals zero:

$$H_c = (D_c)(W_c)/V_s \qquad \text{(Equation 2)}$$

where:

H_c is the organic HAP content of the coating, kg organic HAP per liter coating solids

D_c is the density of coating, kg coating per liter coating, determined according to par. (c)

W_c is the mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to par. (a)

V_s is the volume fraction of coating solids, liters coating solids per liter coating, determined according to par. (b)

(e) Ensure that the organic HAP content for each coating used during the initial compliance period is less than or equal to the applicable emission limit in s. NR 465.23(1) and each thinner and cleaning material used during the initial compliance period does not contain any organic HAP, determined according to par. (a). You shall keep all records required by s. NR 465.25(3) and (4). As part of the notification of compliance status required in s. NR 465.25(1), you shall identify the coating operation or operations for which you used the compliant material option and submit a statement that the coating operation was, or operations were, in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeds the applicable emission limit in s. NR 465.23(1), and you used no thinners or cleaning materials that contain organic HAP, determined according to par. (a).

(3) HOW DO I DEMONSTRATE CONTINUOUS COMPLIANCE WITH THE EMISSION LIMITATIONS? (a) For each compliance period, to demonstrate continuous compliance, you may not use any coating for which the organic HAP content, determined according to sub. (2)(d), exceeds the applicable emission limit in s. NR 465.23(1), and may not use any thinner or cleaning material that contains organic HAP, determined according to sub. (2)(a). Each month following the initial compliance period described in sub. (1) is a compliance period.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner or cleaning material that does not meet the criteria specified in par. (a) is a deviation from the emission limitations that shall be reported as specified in s. NR 465.25(1)(b)6. and (2)(d).

(c) As part of each semiannual compliance report required by s. NR 465.25(2), you shall submit a statement that you were in compliance with the emission limitations during the reporting period because you used no thinners or cleaning materials that contained organic HAP, and you used no coatings for which the organic HAP content exceeded the applicable emission limit in s. NR 465.23(1).

(d) You shall maintain records as specified in s. NR 465.25(3) and (4).

NR 465.27 Compliance requirements for the emission rate without add-on controls option. (1) BY WHAT DATE MUST I CONDUCT THE INITIAL COMPLIANCE DEMONSTRATION? You shall complete the initial compliance demonstration for the initial compliance period according to the requirements of sub. (2). The initial compliance period begins on the applicable compliance date specified in s. NR 465.21(4) and ends on the last day of the first full month after the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next month. The initial compliance demonstration includes the calculations according to sub. (2) and supporting documentation showing that the organic HAP emission rate for the initial compliance period was equal to or less than the applicable emission limit in s. NR 465.23(1).

(2) HOW DO I DEMONSTRATE INITIAL COMPLIANCE WITH THE EMISSION LIMITATIONS? You may use the emission rate without add-on controls option for any individual coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You shall use either the compliant material option or

the emission rate with add-on controls option for any coating operation or operations in the affected source for which you do not use this option. To demonstrate initial compliance using the emission rate without add-on controls option, the coating operation or operations shall meet the applicable emission limit in s. NR 465.23(1) but not the operating limits or work practice standards in s. NR 465.23(3) and (4), respectively, during the initial compliance period. When calculating the organic HAP emission rate according to this subsection, you may not include any coatings, thinners or cleaning materials used on coating operations for which you use the compliant material option or the emission rate with add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners or cleaning materials that have been reclaimed onsite and reused in the coating operation or operations for which you use the emission rate without add-on controls option. You shall meet all of the following requirements to demonstrate initial compliance with the applicable emission limit in s. NR 465.23(1) for the coating operation or operations:

(a) Determine the mass fraction of organic HAP for each coating, thinner and cleaning material used during the compliance period according to the requirements in s. NR 465.26(2)(a).

(b) Determine the volume fraction of coating solids for each coating used during the compliance period according to the requirements in s. NR 465.26(2)(b).

(c) Determine the density of each coating, thinner and cleaning material used during the compliance period according to the requirements in s. NR 465.26(2)(c).

(d) Determine the volume (liters) of each coating, thinner and cleaning material used during the compliance period by measurement or usage records.

(e)1. Calculate the mass of organic HAP emissions during the compliance period using the following equations and the procedures in subd. 2. if applicable:

$$H_e = A + B + C - R_w \qquad \text{(Equation 1)}$$

where:

H_e is the total mass of organic HAP emissions during the compliance period, kg

A is the total mass of organic HAP in the coatings used during the compliance period, kg, as calculated in Equation 1A

B is the total mass of organic HAP in the thinners used during the compliance period, kg, as calculated in Equation 1B

C is the total mass of organic HAP in the cleaning materials used during the compliance period, kg, as calculated in

Equation 1C

R_w is the total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to subd. 2. You may assign a value of zero to Rw if you do not wish to use this allowance

$$A = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Equation 1A)}$$

where:

A is the total mass of organic HAP in the coatings used during the compliance period, kg

$Vol_{c,i}$ is the total volume of coating, i, used during the compliance period, liters

$D_{c,i}$ is the density of coating, i, kg coating per liter coating

$W_{c,i}$ is the mass fraction of organic HAP in coating, i, kg organic HAP per kg coating

m is the number of different coatings used during the compliance period

$$B = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad \text{(Equation 1B)}$$

where:

B is the total mass or organic HAP in the thinners used during the compliance period, kg

$Vol_{t,j}$ is the total volume of thinner, j, used during the compliance period, liters

$D_{t,j}$ is the density of thinner, j, kg thinner per liter thinner

$W_{t,j}$ is the mass fraction of organic HAP in thinner, j, kg organic HAP per kg thinner

n is the number of different thinners used during the compliance period

$$C = \sum_{k=1}^{P} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad \text{(Equation 1C)}$$

where:

C is the total mass of organic HAP in the cleaning materials used during the compliance period, kg

$Vol_{s,k}$ is the total volume of cleaning material, k, used during the compliance period, liters

$D_{s,k}$ is the density of cleaning material, k, kg cleaning material per liter cleaning material

$W_{s,k}$ is the mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg material

p is the number of different cleaning materials used during the compliance period

2. If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in the calculation of the mass of organic HAP emissions using Equation 1, you shall determine it according to the following procedures:

a. You may include in the determination of organic HAP in waste materials only the waste materials that are generated by coating operations for which you use Equation 1 in subd. 1. and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. You may not include in the determination the organic HAP contained in wastewater.

b. Determine either the amount of waste materials sent to a TSDF during the compliance period or the amount collected and stored during the compliance period and designated for future transport to a TSDF. You may not include in your determination any waste materials sent to a TSDF during a compliance period if you have already included them in the amount collected and stored during that compliance period or a previous compliance period.

c. Determine the total mass of organic HAP contained in the waste materials specified in subd. 2.b.

d. Document your methodology to determine the amount of waste materials and the total mass of organic HAP they contain, as required in s. NR 465.25(3)(h).

e. To the extent that waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(f) Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all of the coatings used during the compliance period, using the following equation:

$$V_{st} = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(V_{s,i}\right) \qquad \text{(Equation 2)}$$

where:

V_{st} is the total volume of coating solids used during the compliance period, liters

$Vol_{c,i}$ is the total volume of coating, i, used during the compliance period, liters

$V_{s,i}$ is the volume fraction of coating solids for coating, i, liters solids per liter coating, determined according to s. NR 465.26(2)(b)

m is the number of coatings used during the compliance period

(g) Calculate the organic HAP emission rate, kg organic HAP per liter coating solids used, using the following equation:

$$H_{avg} = \frac{H_e}{V_{st}} \qquad \text{(Equation 3)}$$

where:

H_{avg} is the organic HAP emission rate for the compliance period, kg organic HAP per liter coating solids

H_e is the total mass organic HAP emissions from all materials used during the compliance period, kg, as calculated using Equation 1 in par. (e)1.

V_{st} is the total volume coating solids used during the compliance period, liters, as calculated using Equation 2 in par. (f)

(h) Ensure that the organic HAP emission rate for the initial compliance period is less than or equal to the applicable emission limit in s. NR 465.23(1). You shall keep all records as required by s. NR 465.25(3) and (4). As part of the notification of compliance status required by s. NR 465.25(1), you shall identify the coating operation or operations for which you used the emission rate without add-on controls option and submit a statement that the coating operation was, or operations were, in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in s. NR 465.23(1).

(3) HOW DO I DEMONSTRATE CONTINUOUS COMPLIANCE WITH THE EMISSION LIMITATIONS? (a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to sub. (2)(a) to (g), shall be less than or equal to the applicable emission limit in s. NR 465.23(1). Each month following the initial compliance period described in sub. (1) is a compliance period.

(b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in s. NR 465.23(1), this is a deviation from the emission limitations for that compliance period and shall be reported as specified in s. NR 465.25(1)(b)6. and (2)(e).

(c) As part of each semiannual compliance report required by s. NR 465.25(2), you shall submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in s. NR 465.23(1).

(d) You shall maintain records as specified in s. NR 465.25(3) and (4).

NR 465.28 Compliance requirements for the emission rate with add-on controls option. (1) BY WHAT DATE MUST I CONDUCT PERFORMANCE TESTS AND OTHER INITIAL COMPLIANCE DEMONSTRATIONS? (a) *Existing affected sources*. For an existing affected source, you shall do all of the following:

1. Install and operate all emission capture systems, add-on control devices, and CPMS you use to demonstrate compliance no later than the applicable compliance date specified in s. NR 465.21(4). Except for solvent recovery systems for which you conduct liquid-liquid material balances according to sub. (2)(g), you shall conduct a performance test of each capture system and add-on control device according to the procedures in subs. (5) to (7), and establish the operating limits required by s. NR 465.23(3) no later than the compliance date specified in s. NR 465.21(4). For a solvent recovery system for which you conduct liquid-liquid material balances according to sub. (2)(g), you shall initiate the first material balance no later than the compliance date specified in s. NR 465.21(4).

2. Develop and begin implementing the work practice plan required by s. NR 465.23(4) no later than the compliance date specified in s. NR 465.21(4).

3. Complete the compliance demonstration for the initial compliance period according to the requirements of sub. (2). The initial compliance period begins on the applicable compliance date specified in s. NR 465.21(4) and ends on the last day of the first full month after the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next month. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to subs. (5) to (7); results of liquid-liquid material balances conducted according to sub. (2)(g); calculations according to sub. (2) and supporting documentation showing that, during the initial compliance period, the organic HAP emission rate was equal to or less than the emission limit in s. NR 465.23(1)(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by sub. (9); and documentation of whether you developed and implemented the work

practice plan required by s. NR 465.23(4).

(b) *New and reconstructed affected sources*. For a new or reconstructed affected source, you shall do all of the following:

1. Install and operate all emission capture systems, add-on control devices, and CPMS you use to demonstrate compliance no later than the applicable compliance date specified in s. NR 465.21(4). Except for solvent recovery systems for which you conduct liquid-liquid material balances according to sub. (2)(g), conduct a performance test of each capture system and add-on control device according to the procedures in subs. (5) to (7), and establish the operating limits required by s. NR 465.23(3) no later than 180 days after the applicable compliance date specified in s. NR 465.21(4). For a solvent recovery system for which you conduct liquid-liquid material balances according to sub. (2)(g), initiate the first material balance no later than 180 days after the applicable compliance date specified in s. NR 465.21(4).

2. Develop and begin implementing the work practice plan required by s. NR 465.23(4) no later than the compliance date specified in s. NR 465.21(4).

3. Complete the compliance demonstration for the initial compliance period according to the requirements of sub. (2). The initial compliance period begins on the applicable compliance date specified in s. NR 465.21(4) and ends on the last day of the first full month after the compliance date, or the date you conduct the performance tests of the emission capture systems and add-on control devices, or initiate the first liquid-liquid material balance for a solvent recovery system; whichever is later. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to subs. (5) to (7); results of liquid-liquid material balances conducted according to sub. (2)(g); calculations according to sub. (2) and supporting documentation showing that, during the initial compliance period, the organic HAP emission rate was equal to or less than the emission limit in s. NR 465.23(1)(b); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by sub. (9); and documentation of whether you developed and implemented the work practice plan required by s. NR 465.23(4).

4. Maintain a log detailing the operation and maintenance of the emission capture system, add-on control device and continuous parameter monitors during the period between the compliance date and the performance test conducted as specified in subd. 1. Begin complying with the operating limits for your affected source on the date you complete the performance tests specified in subd. 1. You do not need to comply with the operating limits for the emission capture system and add-on control device required by s. NR 465.23(3) until after you have completed the performance tests specified in subd. 1. This requirement

does not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to sub. (2)(g).

(2) HOW DO I DEMONSTRATE INITIAL COMPLIANCE? You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You shall use either the compliant material option or the emission rate without add-on controls option for any coating operation or operations in the affected source for which you do not use this option. To demonstrate initial compliance, the coating operation or operations for which you use the emission rate with add-on controls option shall meet the applicable emission limit in s. NR 465.23(1) and the work practice standards required in s. NR 465.23(4), and each controlled coating operation shall meet the operating limits required in s. NR 465.23(3). When calculating the organic HAP emission rate according to this subsection, do not include any coatings, thinners or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners or cleaning materials that have been reclaimed onsite and reused in the coating operation or operations for which you use the emission rate with add-on controls option. You shall meet all of the following requirements to demonstrate initial compliance with the emission limitations:

(a) Except as provided in sub. (1)(b)4. and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of par. (g), establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by s. NR 465.23(3), using the procedures specified in subs. (8) and (9).

(b) Develop, implement and document your implementation of the work practice plan required by s. NR 465.23(4) during the initial compliance period as specified in s. NR 465.25(3).

(c) Follow the procedures specified in s. NR 465.27(2)(a) to (d), to determine the mass fraction of organic HAP, density and volume of each coating, thinner and cleaning material used during the compliance period, and the volume fraction of coating solids for each coating used during the compliance period.

(d) Using Equation 1 in s. NR 465.27(2), calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners and cleaning materials used during the compliance period in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(e) Determine the mass of organic HAP emissions reduced for each controlled coating operation during the compliance period. The emissions reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in par. (f) to calculate the mass of organic HAP emissions reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in par. (g) to calculate the organic HAP emissions reduction.

(f) For each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions reduction by applying the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during the compliance period. For any period of time a deviation specified in sub. (4)(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown or malfunction, you shall assume zero efficiency for the emission capture system and add-on control device. For the purposes of completing the compliance calculations, you shall treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation. You may not include those materials in the calculations of organic HAP emissions reduction in Equation 1. The organic HAP emissions reduction shall be calculated using the following equations:

$$H_c = \left(A_I + B_I + C_I\right)\left(\frac{CE}{100} \text{ x } \frac{DRE}{100}\right) \qquad \text{(Equation 1)}$$

where:

H_c is the mass of organic HAP emissions reduction for the controlled coating operation during the compliance period, kg

A_I is the total mass of organic HAP in the coatings used in the controlled coating operation, kg, as calculated in Equation 1A

B_I is the total mass of organic HAP in the thinners used in the controlled coating operation, kg, as calculated in Equation 1B

C_I is the total mass of organic HAP in the cleaning materials used in the controlled coating operation during the compliance period, kg, as calculated in Equation 1C

CE is the capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in subs. (5) and (6) to measure and record capture efficiency.

DRE is the organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in subs. (5) and (6) to measure and record the organic HAP destruction or removal efficiency.

$$A_I = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Equation 1A)}$$

where:

A_I is the mass of organic HAP in the coatings used in the controlled coating operation, kg

$Vol_{c,i}$ is the total volume of coating, i, used, liters

$D_{c,i}$ is the density of coating, i, kg per liter

$W_{c,i}$ is the mass fraction of organic HAP in coating, i, kg per kg

m is the number of different coatings used

$$B_I = \sum_{j=1}^{n} \left(Vol_{t,j}\right) D_{t,j} \left(W_{t,j}\right) \qquad \text{(Equation 1B)}$$

where:

B_I is the mass of organic HAP in the thinners used in the controlled coating operation, kg

$Vol_{t,j}$ is the total volume of thinner, j, used, liters

$D_{t,j}$ is the density of thinner, j, kg per liter

$W_{t,j}$ is the mass fraction of organic HAP in thinner, j, kg per kg

n is the number of different thinners used

$$C_I = \sum_{k=1}^{P} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad \text{(Equation 1C)}$$

where:

C_I is the mass of organic HAP in the cleaning materials used in the controlled coating operation, kg

$Vol_{s,k}$ is the total volume of cleaning material, k, used, liters

$D_{s,k}$ is the density of cleaning material, k, kg per liter

$W_{s,k}$ is the mass fraction of organic HAP in cleaning material, k, kg per kg

p is the number of different cleaning materials used

(g) For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners and cleaning materials that are used in the coating operation controlled by the solvent recovery system during the compliance period. The mass of organic HAP emission reduction by the solvent recovery system shall be calculated using the following procedures and equations:

1. For each solvent recovery system, install, calibrate, maintain and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each compliance period. The device shall be initially certified by the manufacturer to be accurate to within ±2.0% of the mass of volatile organic matter recovered.

2. For each solvent recovery system, determine the mass of volatile organic matter recovered for the compliance period, kg, based on measurement with the device required in subd. 1.

3. Determine the mass fraction of volatile organic matter for each coating used in the coating operation controlled by the solvent recovery system during the compliance period, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24, or an approved alternative method, the test method results will govern.

4. Determine the density of each coating, thinner and cleaning material used in the coating operation controlled by the solvent recovery system during the compliance period, kg per liter, according to s. NR 465.27(2)(c).

5. Measure the volume of each coating, thinner and cleaning material used in the coating operation controlled by the solvent recovery system during the compliance period, liters.

6. Calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using the following equation:

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^{m} Vol_i D_i C_{Vi} + \sum_{j=1}^{n} Vol_j D_j + \sum_{k=1}^{p} Vol_k D_k} \quad \text{(Equation 2)}$$

where:

R_V is the volatile organic matter collection and recovery efficiency of the solvent recovery system during the compliance period, percent

M_{VR} is the mass of volatile organic matter recovered by the solvent recovery system during the compliance period, kg

Vol_i is the volume of coating, i, used in the coating operation controlled by the solvent recovery system during the compliance period, liters

D_i is the density of coating, i, kg coating per liter coating

C_{Vi} is the mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating

Vol_j is the volume of thinner, j, used in the coating operation controlled by the solvent recovery system during the compliance period, liters

D_j is the density of thinner, j, kg thinner per liter thinner

Vol_k is the volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the compliance period, liters

D_k is the density of cleaning material, k, kg cleaning material per liter cleaning material

m is the number of different coatings used in the coating operation controlled by the solvent recovery system during the compliance period

n is the number of different thinners used in the coating operation controlled by the solvent recovery system during the compliance period

p is the number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the compliance period

7. Calculate the mass of organic HAP emissions reduction for the coating operation controlled by the solvent recovery system during the compliance period, using the following equation:

$$H_{CSR} = \left(A_I + B_I + C_I\right)\left(\frac{R_V}{100}\right) \qquad \text{(Equation 3)}$$

where:

H_{CSR} is the mass of organic HAP emissions reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the compliance period, kg

A_I is the total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1A in par. (f)

B_I is the total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1B in par. (f)

C_I is the total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1C in par. (f)

R_V is the volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 in subd. 6.

(h) Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during the compliance period, using Equation 2 in s. NR 465.27(2)(f).

(i) Determine the organic HAP emission rate to the atmosphere, kg organic HAP per liter coating solids used during the compliance period, using the following equation:

$$H_{HAP} = \frac{H_e - \sum_{i=1}^{q}\left(H_{C,i}\right) - \sum_{j=1}^{r}\left(H_{CSR,j}\right)}{V_{st}} \qquad \text{(Equation 4)}$$

where:

H_{HAP} is the organic HAP emission rate to the atmosphere during the compliance period, kg organic HAP per liter coating solids used

H_e is the total mass of organic HAP emissions before add-on controls from all the coatings, thinners and cleaning materials used during the compliance period, kg, determined according to par. (d)

$H_{C,i}$ is the total mass of organic HAP emissions reduction for controlled coating operation, i, during the compliance period, kg, from Equation 1 in par. (f)

$H_{CSR,j}$ is the total mass of organic HAP emissions reduction for controlled coating operation, j, during the compliance period, kg, from Equation 3 in par. (g)

V_{st} is the total volume of coating solids used during the compliance period, liters, from Equation 2 in s. NR 465.27(2)(f)

q is the number of controlled coating operations except those controlled with a solvent recovery system

r is the number of coating operations controlled with a solvent recovery system

(j) Demonstrate initial compliance with the emission limit, by ensuring that the organic HAP emission rate calculated using Equation 4 in par. (i), is less than or equal to the applicable emission limit in s. NR 465.25(3). Keep all records as required by s. NR 465.25(3) and (4). As part of the notification of compliance status required by s. NR 465.25(1), identify the coating operation or operations for which you used the emission rate with add-on controls option and submit a statement that the coating operation or operations was or were in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in s. NR 465.23(1), and you achieved the operating limits and the work practice standards required by s. NR 465.23(3) and (4) respectively.

(4) HOW DO I DEMONSTRATE CONTINUOUS COMPLIANCE WITH THE EMISSION LIMITATIONS? (a) To demonstrate continuous compliance with the applicable emission limit in s. NR 465.23(1), the organic HAP emission rate for each compliance period determined according to the procedures in sub. (2) shall be equal to or less than the applicable emission limit in s. NR 465.23(1). Each month following the initial compliance period described in sub. (1) is a compliance period.

(b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in s. NR 465.23(1), this is a deviation from the emission limitation for that compliance period and shall be reported as specified in s. NR 465.25(1)(b)6. and (2)(g).

(c) You shall demonstrate continuous compliance with each operating limit required by s. NR 465.23(3) that applies to you as specified in Table 1 of this subchapter, and shall do the following as applicable:

1. Report as a deviation from the operating limit, as specified in s. NR 465.25(1)(b)6. and (2)(g), if an operating parameter is out of the allowed range specified in Table 1 of this subchapter.

2. If an operating parameter deviates from the operating limit specified in Table 1 of this subchapter, assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation. For the purposes of completing the compliance calculations specified in sub. (2), treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation. You may not include those materials in the calculation of organic HAP emissions reductions in Equation 1 in sub. (2)(g).

(d) You shall meet the requirements for bypass lines in sub. (9)(b). You shall report it as a deviation, as specified in s. NR 465.25(1)(b)6. and (2)(g), if any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running. For the purposes of completing the compliance calculations specified in sub. (2), you shall treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation. You may not include those materials in the calculation of organic HAP emissions reductions in Equation 1 in sub. (2)(g).

(e) You shall demonstrate continuous compliance with the work practice standards in s. NR 465.23(4). You shall report it as a deviation from the work practice standards, as specified in s. NR 465.25(1)(b)6. and (2)(g), if you did not develop a work practice plan, did not implement the plan, or you did not keep the records required by s. NR 465.25(3)(k)9.

(f) As part of each semiannual compliance report required in s. NR 465.25(2), you shall submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in s. NR 465.23(1), and you achieved the operating limits and the work practice standards required by s. NR 465.23(3) and (4), respectively, during each compliance period.

(g) During periods of startup, shutdown and malfunction of the emission capture system, add-on control device or coating operation that may affect emission capture or control device efficiency, you shall operate in accordance with the SSMP required by s. NR 465.24(1)(d).

(h) Consistent with ss. NR 460.05(4) and 460.06(4)(a), deviations that occur during a period of startup, shutdown or malfunction of the emission capture system, add-on control device or coating operation that may affect emission capture or control device efficiency are not violations if you demonstrate to the department's satisfaction that you were operating in accordance with the SSMP. The department will determine whether deviations that occur during a period of startup, shutdown or malfunction are violations according to the provisions in s. NR 460.05(4).

(j) You shall maintain records as specified in s. NR 465.25(3) and (4).

(5) WHAT ARE THE GENERAL REQUIREMENTS FOR PERFORMANCE TESTS? (a) You shall conduct each performance test required by sub. (1) according to the requirements in s. NR 460.06(4)(a) and under the following conditions unless you obtain a waiver of the performance test according to the provisions in s. NR 460.06(7):

1. Representative operating conditions for the coating operation. Operations during periods of startup, shutdown or malfunction and periods of nonoperation do not constitute representative conditions. You shall record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

2. When the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You shall record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You shall conduct each performance test of an emission capture system according to the requirements in sub. (6) and of an add-on control device according to the requirements in sub. (7).

(c) The performance test to determine add-on control device organic HAP destruction or removal efficiency shall consist of 3 runs as specified in s. NR 460.06(4)(c) and each run shall last at least one hour.

(6) HOW DO I DETERMINE THE EMISSION CAPTURE SYSTEM EFFICIENCY? You shall use the following procedures and test methods to determine capture efficiency as part of the performance test required by sub. (1):

(a) You may assume the capture system efficiency is 100% if both of the following conditions are met:

1. The capture system meets the criteria of Method 204 in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

2. All coatings, thinners and cleaning materials used in the coating operation are applied within the capture system; coating solvent flash-off and coating, curing and drying occurs within the capture system; and the removal or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) If the capture system does not meet both of the criteria in par. (a), use one of the 3 protocols described in subds. 1. to 3. to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic

HAP capture efficiency. For the protocols in subds. 1. and 2., the capture efficiency measurement shall consist of 3 test runs. Each test run shall be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of production which includes surface preparation activities and drying or curing time. The protocols are as follows:

1. 'Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.' The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. You shall use the following procedures to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol:

a. Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, shall also be inside the enclosure. The enclosure shall meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9).

b. Use Method 204A or 204F in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), to determine the mass fraction of TVH liquid input from each coating, thinner and cleaning material used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term VOC in the methods.

c. Use the following equation to calculate the total mass of TVH liquid input from all the coatings, thinners and cleaning materials used in the coating operation during each capture efficiency test run:

$$\mathrm{TVH}_{\mathrm{used}} = \sum_{i=1}^{n} \left(\mathrm{TVH}_i\right)\left(\mathrm{Vol}_i\right)\left(\mathrm{D}_i\right) \qquad \text{(Equation 1)}$$

where:

$\mathrm{TVH}_{\mathrm{used}}$ is the total mass of TVH liquid input from all coatings, thinners and cleaning materials used in the coating operation during the capture efficiency test run, kg

TVH_i is the mass fraction of TVH in coating, thinner or cleaning material, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material

Vol_i is the total volume of coating, thinner or cleaning material, i, used in the coating operation during the capture efficiency test run, liters

D_i is the density of coating, thinner or cleaning material, i, kg material per liter material

n is the number of different coatings, thinners and cleaning materials used in the coating operation during the capture efficiency test run

d. Use Method 204D or 204E in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement substitute TVH for each occurrence of the term VOC in the methods. Use Method 204D if the enclosure is a temporary total enclosure. Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside a building enclosure, other than the coating operation for which capture efficiency is being determined, shall be shut down, but all fans and blowers shall be operating normally.

e. For each capture efficiency test run, determine the percent capture efficiency of the emission capture system, using the following equation:

$$CE = \frac{\left(TVH_{used} - TVH_{uncaptured}\right)}{TVH_{used}} x100 \qquad \text{(Equation 2)}$$

where:

CE is the capture efficiency of the emission capture system vented to the add-on control device, percent

TVH_{used} is the total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg

$TVH_{uncaptured}$ is the total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg

f. Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the 3 test runs.

2. ‘Gas-to-gas protocol using a temporary total enclosure or a building enclosure.’ The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. You shall use the following procedures to measure emission capture system efficiency using the gas-to-gas protocol.

a. Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and cleaning materials are applied and all areas where emissions from these applied coatings and materials subsequently occur such as flash-off, curing and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, shall also be inside the enclosure. The enclosure shall meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9).

b. Use Method 204B or 204C in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods. The sampling points for the Method 204B or 204C measurement shall be upstream from the add-on control device and shall represent total emissions routed from the capture system and entering the add-on control device. If multiple emission streams from the capture system enter the add-on control device without a single common duct, the emissions entering the add-on control device shall be simultaneously measured in each duct, and the total emissions entering the add-on control device shall be determined.

c. Use Method 204D or 204E in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods. Use Method 204D if the enclosure is a temporary total enclosure. Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure other than the coating operation for which capture efficiency is being determined shall be shut down, but all fans and blowers shall be operating normally.

d. For each capture efficiency test run, determine the percent capture efficiency of the emission capture system, using the following equation:

$$CE = \frac{TVH_{captured}}{\left(TVH_{captured} + TVH_{uncaptured}\right)} x100 \qquad \text{(Equation 3)}$$

where:

CE is the capture efficiency of the emission capture system vented to the add-on control device, percent

$TVH_{captured}$ is the total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg

$TVH_{uncaptured}$ is the total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg

e. Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the 3 test runs.

3.'Alternative capture efficiency protocol.' As an alternative to the procedures specified in subds. 1. and 2., you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in 40 CFR part 63, Subpart KK, Appendix A, incorporated by reference in s. NR 484.04(24).

(7) HOW DO I DETERMINE THE ADD-ON CONTROL DEVICE EMISSION DESTRUCTION OR REMOVAL EFFICIENCY? (a) For all types of add-on control devices, use the following test methods:

1. Method 1 or 1A in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), as appropriate, to select sampling sites and velocity traverse points.

2. Method 2, 2A, 2C, 2D, 2F or 2G in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), as appropriate, to measure gas volumetric flow rate.

3. Method 3, 3A or 3B in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), as appropriate, for gas analysis to determine dry molecular weight. You may also use, as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide and carbon monoxide content of exhaust gas in ANSI/ASME, PTC 19.10-1981, "Flue and Exhaust Gas Analyses", incorporated by reference in s. NR 484.11(6).

4. Method 4 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), to determine stack gas

moisture.

5. Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture shall be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either Method 25 or 25A in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), and using the same method for both the inlet and outlet measurements according to the following criteria:

1. Use Method 25 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

2. Use Method 25A if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

3. Use Method 25A if the add-on control device is not an oxidizer.

(c) If 2 or more add-on control devices are used for the same emission stream, you shall measure emissions at the outlet of each device.

Note: For example, if one add-on control device is a concentrator with an outlet for the high-volume, dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet for the low-volume, concentrated stream that is treated with the oxidizer, you shall measure emissions at the outlet of the oxidizer and the high-volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 in this paragraph. If there is more than one inlet or outlet to the add-on control device, you shall calculate the total gaseous organic mass flow rate using Equation 1 in this paragraph for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions.

$$M_f = Q_{sd} C_c [12][0.0416][10^{-6}] \qquad \text{(Equation 1)}$$

where:

M_f is the total gaseous organic emissions mass flow rate, kg/per hour (h)

C_c is the concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, parts per million by volume (ppmv), dry basis

Q_{sd} is the volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F or 2G, dry standard cubic meters/hour (dscm/h)

0.0416 = conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (at 293 Kelvin (K) and 760 millimeters of mercury (mm Hg))

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using the following equation:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} 100 \qquad \text{(Equation 2)}$$

where:

DRE is the add-on control device organic emissions destruction or removal efficiency, percent

M_{fi} is the total gaseous organic emissions mass flow rate at the inlet or inlets to the add-on control device, using Equation 1 in par. (d), kg/h

M_{fo} is the total gaseous organic emissions mass flow rate at the outlet or inlets of the add-on control device, using Equation 1 in par. (d), kg/h

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the 3 test runs and calculated in Equation 2 in par. (e).

(8) HOW DO I ESTABLISH THE EMISSION CAPTURE SYSTEM AND ADD-ON CONTROL DEVICE OPERATING LIMITS DURING THE PERFORMANCE TEST? During the performance test required by sub. (1) and described in subs. (5) to (7), you shall establish the operating limits required by s. NR 465.23(3) according to the following requirements, as applicable, unless you have received approval for alternative monitoring and operating limits under s. NR 460.07(6) as specified in s. NR 465.23(3):

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, according to both of the following:

1. During the performance test, you shall monitor and record the combustion temperature at least once every 15 minutes

during each of the 3 test runs. You shall monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

2. Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) *Catalytic oxidizers.* 1. If your add-on control device is a catalytic oxidizer, according to either of the following:

a. During the performance test, monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the 3 test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

b. Monitor the temperature just before the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in subd. 2. During the performance test, you shall monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the 3 test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

2. You shall develop and implement an inspection and maintenance plan for any catalytic oxidizer or oxidizers for which you elect to monitor according to subd. 1.b. The plan shall address, at a minimum, the following elements:

a. Annual sampling and analysis of the catalyst activity (i.e., conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures.

b. Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems and, as necessary, adjusting the equipment to assure proper air-to-fuel mixtures.

c. Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion and settling. If problems are found, you shall take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency according to sub. (7).

(c) *Carbon adsorbers.* If your add-on control device is a carbon absorber, according to both of the following:

1. Monitor and record the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle

and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

2. The operating limits for your carbon absorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

(d) *Condensers.* If your add-on control device is a condenser, according to both of the following:

1. During the performance test, monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the 3 test runs.

2. Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(e) *Concentrators.* If your add-on control device includes a concentrator, according to all of the following:

1. During the performance test, monitor and record the desorption concentrate stream gas temperature at least once every 15 minutes during each of the 3 runs of the performance test.

2. Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

3. During the performance test, monitor and record the pressure drop of the dilute stream across the concentrator at least once every 15 minutes during each of the 3 runs of the performance test.

4. Use the data collected during the performance test to calculate and record the average pressure drop. This is the maximum operating limit for the dilute stream across the concentrator.

(f) *Emission capture system.* 1. For a PTE, according to Table 1 of this subchapter.

2. For each capture device that is not part of a PTE that meets the criteria of sub. (6)(a), according to both of the following:

a. During the capture efficiency determination required by sub. (1) and described in subs. (5) and (6), monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the 3 test runs at a point in the duct between the capture device and the add-on control device inlet.

b. Calculate and record the average gas volumetric flow rate or duct static pressure for the 3 test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

(9) WHAT ARE THE REQUIREMENTS FOR CONTINUOUS PARAMETER MONITORING SYSTEM INSTALLATION, OPERATION AND MAINTENANCE? (a) *General.* 1. You shall install, operate and maintain each CPMS according to the following requirements, except that subd. 1.a. and b. do not apply to capture system bypass lines and carbon adsorbers as specified in pars. (b) and (d):

a. The CPMS shall complete a minimum of one cycle of operation for each successive 15-minute period. You shall have a minimum of 4 equally spaced successive cycles of CPMS operation in one hour.

b. Determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation except as specified in subd. 1.f.

c. Record the results of each inspection, calibration and validation check of the CPMS.

d. Maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

e. Operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

f. You may not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You shall use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

2. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Except for periods of required quality assurance or control activities, any period during which the CPMS fails to operate and record data continuously as required by subd. 1.a., or generates data that cannot be included in calculating averages as specified in subd. 1.f., is a deviation from the monitoring requirements.

(b) *Capture system bypass line.* You shall comply with all of the following requirements, in addition to those specified in par. (a)1.c. to e., for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere:

1. Monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism shall meet one of the following requirements:

a. Install, calibrate, maintain and operate, according to the manufacturer's specifications, a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position shall be recorded, as well as every time the flow direction is changed. The flow control position indicator shall be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

b. Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You shall visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position and the emissions are not diverted away from the add-on control device to the atmosphere.

c. Ensure that any bypass line valve is in the closed, non-diverting, position through monitoring of valve position at least once every 15 minutes. You shall inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

d. Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You shall inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shutdown the coating operation.

2. If any bypass line is opened, you shall include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in s. NR 465.25(2).

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device, including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams, you shall comply with the following requirements, as applicable, in addition to those specified in par. (a)1.:

1. For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

2. For a catalytic oxidizer, install a gas temperature monitor in the gas stream immediately before the catalyst bed, and if you establish operating limits according to sub. (8)(b)1. and 2., also install a gas temperature monitor in the gas stream immediately after the catalyst bed.

3. For each gas temperature monitoring device, comply with all of the following requirements:

a. Locate the temperature sensor in a position that provides a representative temperature.

b. Use a temperature sensor with a measurement sensitivity of 4°F or 0.75% of the temperature value, whichever is larger.

c. Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

d. If a gas temperature chart recorder is used, ensure that it has a measurement sensitivity in the minor division of at least 20°F.

e. Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor yields a reading within 30°F of the process temperature sensor's reading.

f. Any time the sensor exceeds the manufacturer's specified maximum operating temperature range, either conduct calibration and validation checks or install a new temperature sensor.

g. At least monthly, inspect components for integrity and electrical connections for continuity, oxidation and galvanic corrosion.

(d) *Carbon adsorbers.* If you are using a carbon adsorber as an add-on control device, you shall monitor the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle and the carbon bed temperature after each regeneration and cooling cycle and comply with all of the following requirements, in addtion to those specified in par. (a)1.c. to e.:

1. The regeneration desorbing gas mass flow monitor shall be an integrating device having a measurement sensitivity of ±10%, capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

2. The carbon bed temperature monitor shall have a measurement sensitivity of 1% of the temperature recorded or 1°F, whichever is greater, and shall be capable of recording the temperature within 15 minutes of completion of any carbon bed cooling cycle.

(e) *Condensers.* If you are using a condenser, you shall monitor the condenser outlet (product side) gas temperature and comply with all of the following requirements in addtion to those specified in par. (a)1.:

1. The gas temperature monitor shall have a measurement sensitivity of 1% of the temperature recorded or 1°F, whichever is greater.

2. The temperature monitor shall provide a gas temperature record at least once every 15 minutes.

(f) *Concentrators.* If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you shall comply with all of the following requirements, in addition to those specified in par. (a)1.:

1. Install a temperature monitor in the desorption gas stream and meet the requirements in pars. (a)1. and (c)3.

2. Install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed and meet all of the following requirements:

a. Locate the pressure sensor or sensors in or as close to a position that provides a representative measurement of the pressure.

b. Minimize or eliminate pulsating pressure, vibration and internal and external corrosion.

c. Use a gauge with a minimum tolerance of 0.5 inch of water or a transducer with a minimum tolerance of 1% of the pressure range.

d. Check the pressure tap daily.

e. Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

f. Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

g. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

(g) *Emission capture systems.* You shall comply with the following requirements, as applicable, in addition to those specified in par. (a)1., for capture system monitoring:

1. For each flow measurement device, comply with all of the following requirements in addition to those specified in par. (a):

a. Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

b. Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

c. Conduct a flow sensor calibration check at least semiannually.

d. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

2. For each pressure drop measurement device, comply with all of the following requirements in addition to those specified in par. (a):

a. Locate the pressure sensor or sensors in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.

b. Minimize or eliminate pulsating pressure, vibration and internal and external corrosion.

c. Check pressure tap pluggage daily.

d. Using an inclined manometer with a measurement sensitivity of 0.0002 inch water, check gauge calibration quarterly and transducer calibration monthly.

e. Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

f. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

Table 1
Operating Limits if Using the Emission Rate With Add-on Controls Option

If you are required to comply with operating limits by s. NR 465.23(3), you shall comply with the applicable operating limits in this table.

For the following device:	You shall meet the following operating limits:	And you shall demonstrate continuous compliance with the operating limit by doing the following:

(1) Thermal oxidizer	(a) The average combustion temperature in any 3-hour period may not fall below the combustion temperature limit established according to s. NR 465.28(8)(a).	1. Collecting the combustion temperature data according to s. NR 465.28(9)(c). 2. Reducing the data to 3-hour block averages. 3. Maintaining the 3-hour average combustion temperature at or above the combustion temperature limit.
(2) Catalytic oxidizer	(a)The average temperature measured just before the catalyst bed in any 3-hour period may not fall below the limit established according to s. NR 465.28(8)(b) and either par. (b) or (c).	1. Collecting the temperature data according to s. NR 465.28(9)(c). 2. Reducing the data to 3-hour block averages temperatures before the catalyst bed. 3. Maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.
	(b) Ensure that average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to s. NR 465.28(8)(b)2.	1. Collecting the temperature data according to s. NR 465.28(9)(c). 2. Reducing the data to 3-hour block difference across averages. 3. Maintaining the 3-hour average temperature difference at or above the temperature difference limit.
	(c) Develop and implement an inspection and maintenance plan according to s. NR 465.28(8)(b)4.	1. Maintaining an up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of the monthly inspections of the oxidizer system and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by s. NR 465.28(8)(b)4., you shall take corrective action as soon as practicable consistent with the manufacturer's recommendations.

(3) Carbon adsorber	(a) The total regeneration desorbing gas, e.g., steam or nitrogen, mass flow for each carbon bed regeneration cycle may not fall below the total regeneration desorbing gas mass flow limit established according to s. NR 465.28(8)(c).	1. Measuring the total regeneration desorbing gas, e.g., steam or nitrogen, mass flow for each regeneration cycle according to s. NR 465.28(9)(d). 2. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.
	(b) The temperature of the carbon bed, after completing each regeneration and any cooling cycle, may not exceed the carbon bed temperature limit established according to s. NR 465.28(8)(c).	1. Measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to s. NR 465.28(9)(d). 2. Operating the carbon beds such that each carbon bed is not returned to service until the recorded temperature of the carbon bed is at or below the temperature limit.
(4) Condenser	(a) The average condenser outlet, product side, gas temperature in any 3-hour period may not exceed the temperature limit established according to s. NR 465.28(8)(d).	1. Collecting the condenser outlet, product side, gas temperature according to s. NR 465.28(9)(e). 2. Reducing the data to 3-hour block averages. 3. Maintaining the 3-hour average gas temperature at the outlet at or below the temperature limit.
(5) Concentrators, including zeolite wheels and rotary carbon adsorbers	(a) The average gas temperature of the desorption concentrate stream in any 3-hour period may not fall below the limit established according to s. NR 465.28(8)(e).	1. Collecting the temperature data according to s. NR 465.28(9)(f). 2. Reducing the data to 3-hour block averages. 3. Maintaining the 3-hour average temperature at or above the temperature limit.
	(b) The average pressure drop of the dilute stream across the concentrator in any 3-hour period may not fall below the limit established according to s. NR 465.28(8)(e).	1. Collecting the pressure drop data according to s. NR 465.28(9)(f). 2. Reducing the pressure drop data to across the 3-hour block averages. 3. Maintaining the 3-hour average pressure drop at or above the pressure drop limit.

(6) Emission capture system that is a PTE according to s. NR 465.28(6)(a).	(a) The direction of the air flow at all times shall be into the enclosure, and either par. (b) or (c).	1. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to s. NR 465.28(9)(g)1. or the pressure drop across the enclosure according to s. NR 465.28(9)(g)2. 2. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.
	(b) The average facial velocity of air through all natural draft openings in the enclosure shall be at least 200 feet per minute.	1. See par. (a).
	(c) The pressure drop across the enclosure shall be at least 0.007 inches H_2O, as established in Method 204 in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9).	1. See par. (a).
(7) Emission capture system that is not a PTE according to s. NR 465.28(6)(a).	(a) The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period may not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to s. NR 465.28(8)(f).	1. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to s. NR 465.28(9)(g). 2. Reducing the data to 3-hour block averages. 3. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit.

Table 3
Default Organic HAP Mass Fraction for Solvents and Solvent Blends

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

Solvents and solvent blends	CAS Number	Average organic HAP mass fraction	Typical organic HAP, percent by mass
(1) Toluene	108-88-3	1.0	Toluene
(2) Xylene(s)	1330-20-7	1.0	Xylenes, Ethylbenzene
(3) Hexane	110-54-3	0.5	n-Hexane
(4) n-Hexane	110-54-3	1.0	n-Hexane

(5) Ethylbenzene	100-41-4	1.0	Ethylbenzene
(6) Aliphatic 140		0	None
(7) Aromatic 100		0.02	1% Xylene, 1% Cumene
(8) Aromatic 150		0.09	Naphthalene
(9) Aromatic naphtha	64742-95-6	0.02	1% Xylene, 1% Cumene
(10) Aromatic solvent	64742-94-5	0.1	Naphthalene
(11)Exempt mineral spirits	8032-32-4	0	None
(12) Ligroines (VM & P)	8032-32-4	0	None
(13) Lactol spirits	64742-89-6	0.15	Toluene
(14) Low aromatic white spirit	64742-82-1	0	None
(15) Mineral spirits	64742-88-7	0.01	Xylenes
(16) Hydrotreated naphtha	64742-48-9	0	None
(17) Hydrotreated light distillate	64742-47-8	0.001	Toluene
(18) Stoddard solvent	8052-41-3	0.01	Xylenes
(19) Super high-flash naphtha	64742-95-6	0.05	Xylenes
(20) Varsol® solvent	8052-49-3	0.01	0.5% Xylenes, 0.5% Ethylbenzene
(21) VM & P naphtha	64742-89-8	0.06	3% Toluene, 3% Xylene
(22) Petroleum distillate mixture	68477-31-6	0.08	4% Naphthalene, 4% Biphenyl

Table 4
Default Organic HAP Mass Fraction for Petroleum Solvent Groups[a]

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer’s formulation data.

Solvent type	**Average organic HAP mass fraction**	**Typical organic HAP, percent by mass**
Aliphatic[b]	0.03	1% Xylene, 1% Toluene and 1% Ethylbenzene
Aromatic[c]	0.06	4% Xylene, 1% Toluene and 1% Ethylbenzene

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[a] Use this table only if the solvent blend does not match any of the solvent blends in Table 3 and you only know whether the blend is aliphatic or aromatic.

[b] e.g., mineral spirits 135, mineral spirits 150 EC, naphtha, mixed hydrocarbon, aliphatic hydrocarbon, aliphatic naphtha, naphthol spirits, petroleum spirits, petroleum oil, petroleum naphtha, solvent naphtha, solvent blend.

[c] e.g., medium-flash naphtha, high-flash naphtha, aromatic naphtha, light aromatic naphtha, light aromatic hydrocarbons, aromatic hydrocarbons, light aromatic solvent.

SECTION 17. NR 484.04(9) and (24) in Table 2 in NR 484.04 are amended to read:

CFR Appendix Referenced		Title	Incorporated by Reference For
NR 484.04 (9)	40 CFR part 51 Appendix M	Recommended Test Methods for State Implementation Plans	NR 439 NR 460.06(4)(b)(intro.) NR 465.09(4) (b)1. and 2. NR 465.22(25), (29) and (31) NR 465.25(3)(k)4. and 5.a. and b. NR 465.28(6)(b)1.a., b. and d. and 2.a., b. and c. and Table 1 NR 466.09(5)
(24)	40 CFR part 63, Subpart KK, Appendix A	Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods	NR 439.06(3)(am) NR 465.09(4)(b)3. NR 465.25(1)(b)9.a. NR 465.28(6)(b)3. NR 466.09(6)

SECTION 18. NR 484.10(22) in Table 5 in NR 484.10 is amended to read:

Standard Number		Standard Title	Incorporated by Reference For
NR 484.10 (22)	ASTM D1475-98	Standard Test Method for Density of Liquid Coatings, Inks, and Related Products	40 CFR part 60 Appendix A: Method 24, par. 2.1 Method 24A, par. 2.2 Method 24A, par. 2.3 NR 465.26(2)(b)3. and (c)

SECTION 19. NR 484.10(39e) and (55m) are created to read:

Standard Number		Standard Title	Incorporated by Reference For
NR 484.10 (39e)	ASTM D2697-86 (1998)	Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings	NR 465.26(2)(b)1.
(55m)	ASTM D6093-97	Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer	NR 465.26(2)(b)1.

SECTION 20. NR 484.11(6) including Table 6F is amended to read:

NR 484.11(6) The following ~~is a document~~ are documents from the American ~~society~~ Society of ~~mechanical engineers~~

Mechanical Engineers (ASME):

Note: Copies may be purchased for personal use from:

The American Society of Mechanical Engineers

22 Law Drive

Fairfield NJ 07004

Table 6F
ASME Document Reference

Document Number	Title	Incorporated by Reference For
(a) PTC 4.2-1969 (1997)	Test Code for Coal Pulverizers	NR 439.098(1)(c)

SECTION 21. NR 484.11(6)(b) is created to read:

Document Number	Title	Incorporated by Reference For
NR 484.11(6) (b) PTC 19.10-1981	Flue and Exhaust Gas Analysis	NR 465.28(7)(a)3.

SECTION 22. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 23. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on October 22, 2003.

Dated at Madison, Wisconsin _________________________________.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By___________________________________
Scott Hassett, Secretary

(SEAL)