

June 13, 2007

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FID # : 642025010  
PERMIT #: 642025010-F10

Mr. Bruce Corning, VP Management Systems  
Northern Engraving Corp  
PO Box 377  
Sparta, WI 54656

Dear Mr. Corning:

The Air Management Program of the Department of Natural Resources has performed a preliminary review of the renewal application for air pollution control permit number 642025010-F04 regarding the operation of an existing decorative nameplate and automotive trim manufacturing facility.

The West Central Region Air Program, LaCrosse Area Office has prepared an analysis of the proposed renewal and has made a preliminary determination that it is approvable. The analysis and preliminary determination indicated that the emission limitations and special permit conditions in the attached draft permit should be included in any renewed permit which may be issued by the Department. Please review this draft permit carefully.

The Department will now accept public comments on the preliminary analysis and draft permit as required by ss. 285.61(6) and (7) and ss. 285.62(3), (4) and (5), Wis. Stats. Comments will be received for 30 days after publication of a Class I Legal notice. The Department will publish this notice. **Please review the Draft Permit and provide your comments to the Department within the same 30 day period.**

The public input, if any, will also be reviewed to note if significant public interest in the project exists and whether a public hearing is warranted. If a hearing is warranted, it would be held within 60 days from the end of the public comment period.

This draft operation permit contains monitoring requirements relating to the emissions from an air contaminant source. Pursuant to s. 285.17(2)(b), Wis. Stats., the Department is notifying you of the proposed monitoring requirements in the attached draft permit. You have the opportunity to demonstrate to the Department that the proposed monitoring requirements are unreasonable considering, among other factors, monitoring requirements imposed on similar air contaminant sources. **Please review the monitoring requirements.** If you do seek review of the monitoring requirements, please notify me within 30 days of publication of the notice seeking public comment. Your request for review should identify the specific monitoring requirements you are challenging and provide any information you have to demonstrate that the monitoring requirements are unreasonable. If the Department's Air and Waste Division Administrator determines that the monitoring requirements are unreasonable, the Department may not impose the monitoring requirements. If the Administrator determines that the monitoring requirements are reasonable, you may obtain a review of that determination by the Secretary of the Department. If the Secretary determines that the monitoring requirements are unreasonable, the Department may not impose the monitoring requirements.

Please be advised that this is only a preliminary determination. If you have any questions regarding this matter, please feel free to contact me at 608-789-5544.

Sincerely,

Mary Oleson  
Air Management Engineer

cc: GEF II – AM/7 – FESOP Renewal

Enclosure



## APPENDIX A3



### PREAMBLE

An Asterisk (\*) throughout this document denotes legal authority, limitations and conditions which are **not** federally enforceable.

#### **Concurrent Permit Actions Performed as Part of the Review and Issuance of Permit 642025010-F10.**

Construction Permits Issued in Conjunction with Permit 642025010-F10 Under s. 285.61(8), Wis. Stats.: none

Revised Construction Permits Issued in Conjunction with Permit 642025010-F10 Under s. NR 406.11, Wis. Adm. Code: none

Operation (CONOP) Permits Issued in Conjunction with Permit 642025010-F10 Under s. 285.62(7)(b), Wis. Stats.: none

Revised Operation Permits Issued in Conjunction with Permit 642025010-F10 Under ss. NR 407.11, 407.12, 407.13 and/or 407.14, Wis. Adm. Code: none

**The following permits, orders, etc., are adopted, under ss. 285.65(3), Wis. Stats., NR 406.11(1)(c) and (d), NR 407.09(2)(d) and NR 407.15(3) and (4), Wis. Adm. Code, by Permit 642025010-F10 which then becomes the primary enforceable document:** 05-MEC-206/642025010-F04, 03-POY-016/642025010-F03, 02-MEC-618/642025010-F02, 642025010-F01, 97-JCH-130, 97-JCH-107, 95-MM-617, 93-IRS-040, 92-POY-157, 92-POY-068, 91-POY-136, 91-POY-088, 90-IRS-135, EOP-10-KJC-83-32-077A, 642025010-N01, 87-IRS-081, 87-MJT-033, 86-RV-049, and EOP-10-KJC-83-42-077

#### **Stack and Process Index:**

- Stack S02, Boiler B02 - Natural Gas/Propane Space Heaters with a Total Rating of 37.1 mmBtu/hr - Installed 1994**
- Stack S12, Boiler B22 - Natural Gas/Propane Boiler Rated at 8.4 mmBtu/hr - Installed 1961**
- Stack S13, Boiler B23 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S14, Boiler B24 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S15, Boiler B25 - Natural Gas/Propane Boiler Rated at 6.3 mmBtu/hr - Installed 1961**
- Stack S03, Process P03 - 5 Lithographic Lines with UV Curing - Installed 1988**
- Stack S18, Process P32 - 4 Roll Coating Machines, and 3 Natural Gas/Propane Curing Oven rated at 5 mmBtus/hr, 6 mmBtus/hr, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 (P32-1S Installed 1984; P32-10S Installed 1989; P32-87S Installed 1993) (Only 3 can be operated at a time.) - Modified 2003 and 2005.**
- Stack S19, Process P33 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (P-33-18S-2B) - Installed 1993**
- Stack S53, Process P37 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S; P-43-SOS; P171-SOS)**
- Stack S41, Process P41 - Two Litho Pressess with Two UV Ovens - Installed 2001**
- Stack S43, Process P43 - One Screening Machine and Three Small Screening Machines with One Electric Drying Oven - Installed 2001**
- Stack S42, Process P42 - Two Roll Coaters with Four Electric Drying Ovens - Utilized for R&D Activities - Installed 2001**
- Stack S44, Process P44 - Spraybooth - Utilized for R&D Activities - Installed 2001**
- Stack S57, Process P57 - Plastic Spray Booth with (this booth uses same curing oven used for P33) - (P-58-PBS)**
- Stack S63, Process P63 - Miscellaneous Facility Wide Cleanup**
- Stack S72, Process P72 - Towel Dryer - Installed 1991**
- Stack S75, Process P75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven - Installed 2003**

**Stack S79, Process P79 - Two Screening Lines, One with 1 Screening Machine and 1 UV Oven, One with 2 Screening Machines and 1 UV Oven**

**Stack S80, Process P80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven**

**Insignificant Emission Units:**

Boiler, Turbine, and HVAC System Maintenance.  
Convenience Water Heating.  
Demineralization and Oxygen Scavenging of Water for Boilers.  
Fire Control Equipment.  
Internal Combustion Engines Used for Warehousing and Material Transport.  
Janitorial Activities.  
Maintenance of Grounds, Equipment, and Buildings (lawn care, painting, etc.).  
Office Activities.  
Pollution Control Equipment Maintenance.  
Sanitary Sewer and Plumbing Venting.  
Carpentry shop, Diamond cutting, powder coat  
Adhesive application  
Norlens  
Paint Lab, reactor, ink mill  
Screenmaking  
Injection molding, water quality lab  
Litho lab  
Sheet Prep  
Art Dept.  
Tool Room  
Distillation  
Underground storage tanks  
Punch Presses

**Permit Shield** — Unless precluded by the Administrator of the US EPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats., and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply. The following emission limitations were reviewed in the analysis and preliminary determination and were determined not to apply to this stationary source:

Boilers B22, B23, B24, and B25: The boilers are not subject to the new source performance standards for fossil fuel steam generators of s. NR 440.19, Wis. Adm. Code because each boiler has a heat input rating less than 250 mmBTU per hour and was installed prior to August 17, 1971. The boilers are not subject to the new source performance standards for industrial-commercial-institutional steam generating unit of s. NR 440.205, Wis. Adm. Code, because each boiler has a heat input rating less than 100 mmBtu per hour and was installed prior to June 19, 1984. The boilers are not subject to the new source performance standards for small industrial-commercial-institutional steam generating units of s. NR 440.207, Wis. Adm. Code because each boiler was installed prior to June 9, 1989.

Process P03: Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county the requirements of s. NR 422.142, Wis. Adm. Code do not apply to process P03, pursuant to s. NR 422.142(1), Wis. Adm. Code. Because the maximum theoretical volatile organic compound emissions from each litho line are less than 15 pounds per day, the litho lines are exempt from the requirements of s. NR 424.03(2), Wis. Adm. Code, pursuant to s. NR 424.03(1)(a)4., Wis. Adm. Code.

Process P63: Because cleanup is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code.

**Facility:** Emissions from firing natural gas and propane, which are group I virgin fossil fuels, in space heaters B02, in boilers B22, B23, B24, and B25, and in the ovens associated with P32, P33, and P37 are exempt from ch. NR 445, Wis. Adm. Code requirements, pursuant to ss. NR 445.04(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1.; ss. NR 445.05(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1.; and s NR 445.07(5)(a), Wis. Adm. Code.

**Part I** — The headings for the areas in the permit are defined below. The legal authority for these limitations or methods follows them in [brackets].

**Pollutant** – This area will note which pollutant is being regulated by the permit.

**Limitations** – This area will list all applicable emission limitations that apply to the source, including case-by-case limitations such as Latest Available Control Techniques (LACT), Best Available Control Technology (BACT), or Lowest Achievable Emission Rate (LAER). It will also list any voluntary restrictions on hours of operation, raw material use, or production rate requested by the permittee to limit potential to emit.

**Compliance Demonstration** – The compliance demonstration methods outlined in this area may be used to demonstrate compliance with the associated emission limit or work practice standard listed under the corresponding **Limitations** column. The compliance demonstration area contains limits on parameters or other mechanisms that will be monitored periodically to ensure compliance with the limitations. The requirement to test as well as initial and periodic test schedules, if testing is required, will be stated here. Notwithstanding the compliance determination methods which the owner or operator of a sources is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

**Reference Test Methods, Recordkeeping, and Monitoring Requirements** – Specific US EPA Reference test methods or other approved test methods will be contained in this area and are the methods that must be used whenever testing is required. A reference test method will be listed even if no testing is immediately required. Also included in this area are any recordkeeping requirements and their frequency and reporting requirements. Accuracy of monitoring equipment shall meet, at a minimum, the requirements of s. NR 439.055(3) and (4), Wis. Adm. Code, as specified in Part II of this permit.

**Condition Type** – This area will specify other conditions that are applicable to the entire facility that may not be tied to one specific pollutant.

**Conditions** – Specific conditions usually applicable to the entire facility or compliance requirements.

**Compliance Demonstration** – This area contains monitoring and testing requirements and methods to demonstrate compliance with the conditions.

**PART II** — This section contains the general limitations that the permittee must abide by. These requirements are standard for most sources of air pollutants so they are included in this section with every permit.

**DRAFT AIR POLLUTION CONTROL OPERATION PERMIT RENEWAL**

EI FACILITY NO: 642025010  
TYPE: Synthetic Minor, Non-Part 70

PERMIT NO.: 642025010-F10

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,

Name of Source: Northern Engraving Corporation  
Street Address: PO Box 377,  
803 S Black River Street  
Sparta, Monroe County, Wisconsin  
Responsible Official, & Title: Mr. Bruce Corning, VP Management Systems

is authorized to operate a decorated nameplate and automotive trim manufacturing facility in conformity with the conditions herein.

**THIS OPERATION PERMIT EXPIRES** \_\_\_\_\_ **Date will be inserted at the time of issuance.**

**A RENEWAL APPLICATION MUST BE SUBMITTED AT LEAST 6 MONTHS, BUT NOT MORE THAN 18 MONTHS, PRIOR TO THIS EXPIRATION DATE [ss. 285.66(3)(a), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].**

**No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely application for renewal of the permit. If you submit a timely application for renewal, the existing operation permit will not expire until the renewal application has been finally acted upon by DNR. [ss. 227.51(2), 285.62(8)(b), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].**

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in Parts I and II hereof.

Dated at Wisconsin Rapids, Wisconsin, \_\_\_\_\_

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

By \_\_\_\_\_  
Joseph E. Ancel  
West Central Region, Air Team Supervisor

**PART I  
SPECIFIC PERMIT CONDITIONS**

- A.** *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

**1. Volatile Organic Compound Emissions**

**a. Limitations:**

(1) The total volatile organic compound emissions from the facility may not exceed 85 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats and s. 285.65(7), Wis. Stats.]

(2) The volatile organic compound emissions from each of process P41, P42, and P43 may not exceed 1666 pounds per month. (Note: This limitation is necessary for these processes to be exempt from construction permit requirements.) [s. NR 406.04(1)(g), Wis. Adm. Code]

**b. Compliance Demonstration Methods:**

(1) Each month the permittee shall calculate the total volatile organic compound emissions from the facility as follows:

$$E = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)] - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]\}$$

where:

E is the monthly VOC emissions (tons/month);

U is the monthly usage of each ink, coating, solvent, or other VOC containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other VOC containing material used during the month (pounds/gallon)

C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);

n identifies each ink, coating, solvent or other VOC containing material used during the month;

G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content;

S is the amount of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month (gallons/month);

P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other VOC containing material recovered and shipped off site during the month.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) To demonstrate compliance with condition I.A.1.a.(1), the permittee shall calculate the total volatile organic compound emissions from the facility over each 12 consecutive month period by summing the monthly volatile organic compound emissions as calculated in I.A.1.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(3) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content ( $C_n$ ) and the density ( $W_n$ ) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (a) each time there is a substantial change to

materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, whichever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) To demonstrate compliance with condition I.A.1.a.(2) the permittee shall calculate the total monthly volatile organic compound emissions from each of process P41, P42, and P43 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]

$$E_{\text{monthly}} = [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)] - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]$$

where:

$E_{\text{monthly}}$  is the monthly VOC emissions (pounds/month);

U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 during the month (gallons/month);

W is the density of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 during the month (pounds/gallon);

C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);

n identifies each ink, coating, clean-up solvent or other VOC containing material used on process P42 during the month;

G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content; S is the amount of each spent ink, coating, solvent or other VOC containing material recovered from each of processes P41, P42, and P43 and shipped off site each month (gallons/month);

P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered from each of processes P41, P42, and P43 and shipped off site each month in pounds per gallon; and

m identifies each spent ink, coating, solvent or other VOC containing material recovered from each of processes P41, P42, and P43 and shipped off site during the month.

This calculation shall be performed within twenty calendar days of the end of each calendar month.

**c. Record Keeping and Monitoring Requirements:**

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other VOC containing material used at the facility:

- (a) A unique name or identification number; and
- (b) The VOC content, expressed as a weight fraction ( $C_n$ ).  
[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

- (a) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per month ( $U_n$ );
- (b) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon ( $W_n$ );
- (c) The G multiplier factor for the VOC in the material ( $G_n$ ), including adequate documentation to show the derivation and appropriateness of the multiplier factor;
- (d) The amount of spent ink, coating, solvent, or other VOC containing material recovered and shipped off site in gallons per month ( $S_m$ );
- (e) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site in pounds per gallon ( $P_m$ ).
- (f) The total monthly VOC emissions from the facility in tons per month (E), as calculated in I.A.1.b.(1); and
- (g) The total VOC emissions from the facility in tons per year as calculated in I.A.1.b.(2).  
[s. NR 439.04(1)(d), Wis. Adm. Code]

(3) To demonstrate compliance with condition I.A.1.a.(2) the permittee shall keep records of the following for each of processes P41, P42, and P43:

- (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43;
- (ii) The VOC content, expressed as a weight fraction ( $C_n$ ) of each ink, coating, clean-up solvent, or other VOC containing material used on each of process P41, P42, and P43;
- (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 in gallons per month ( $U_n$ );
- (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 in pounds per gallon ( $W_n$ );
- (v) The G multiplier factor for the VOC in the material ( $G_n$ ), including adequate documentation to show the derivation and appropriateness of the multiplier factor;

(vi) The total monthly VOC emissions from each of processes P41, P42, and P43 in pounds per month ( $E_{\text{monthly}}$ ), as calculated in I.A.1.b.(5).  
[s. NR 439.04(1)(d), Wis. Adm. Code]

**d. Reference Test Methods:**

(1) Reference Test Method for Volatile Organic Compound Emissions: Whenever compliance emission testing is required, US EPA Method 18, 25, 25A or 25B shall be used to demonstrate compliance. [s. NR 439.06(3)(a), Wis. Adm. Code]

(2) Reference Test Method for Volatile Organic Compound Content: Whenever VOC content testing is required, US EPA Method 24 or 24A shall be used to determine the organic solvent content, the volume of solids, the weight of solids, the water content and the density of inks. [s. NR 439.06(3)(b), Wis. Adm. Code]

**2. Hazardous Air Pollutant Emissions**

**a. Limitations:**

(1) The emissions of each hazardous air pollutant regulated by the Clean Air Act shall be less than 8 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]

(2) The total emissions of all hazardous air pollutants regulated by the Clean Air Act combined shall be less than 20 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration Methods:**

(1) Each month the permittee shall calculate the total emissions of each hazardous air pollutant from the facility regulated by the Clean Air Act as follows:<sup>69</sup> [s. NR 407.09(4)(a)1., Wis. Adm. Code]

$$E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1 \times F_1) + (U_2 \times W_2 \times H_2 \times F_2) + \dots + (U_n \times W_n \times H_n \times F_n)] - [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$$

where:

$E_x$  is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month);

x identifies each HAP emitted from the facility

U is the monthly usage of each ink, coating, solvent, or other HAP containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other HAP containing material used during the month (pounds/gallon)

H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the month expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25);

F is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content. For those HAP containing materials for which the HAP is 100% emitted, F equals 1 and does not have to be specifically considered in the equation.;

n identifies each ink, coating, solvent or other HAP containing material used during the month;

S is the amount of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month (gallons/month);

I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other HAP containing material recovered and shipped off site during the month.

(2) To demonstrate compliance with condition I.A.2.a.(1), the permittee shall calculate the emissions of each hazardous air pollutant regulated by the Clean Air Act over each 12 consecutive month period by summing the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.A.2.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

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<sup>69</sup> This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

(3) Each month the permittee shall calculate the total emissions of hazardous air pollutants regulated by the Clean Air Act as follows:

$$E_{\text{hap}} = 3 E_x$$

where:

$E_{\text{hap}}$  is the monthly total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/month);

$E_x$  is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month) as calculated in I.A.2.b.(1);

x identifies each HAP emitted from the facility.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(4) To demonstrate compliance with condition I.A.2.a.(2), the permittee shall calculate the total emissions of all hazardous air pollutants regulated by the Clean Air Act over each 12 consecutive month period by summing the monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.A.2.b.(3) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The permittee shall use coating manufacturer's formulation data to determine the HAP content ( $H_n$ ) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]

(6) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (a) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

**c. Record Keeping and Monitoring Requirements:**

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other HAP containing material used at the facility:

(a) A unique name or identification number; and

(b) The weight fraction of each HAP contained in the material ( $H_n$ );

(c) The F multiplier factor for the HAP in the material ( $F_n$ ).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

(a) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per month ( $U_n$ );

(b) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon ( $W_n$ );

(c) The F multiplier factor for the HAP in the material ( $F_n$ ), including adequate documentation to show the derivation and appropriateness of the multiplier factor;

(d) The amount of spent ink, coating, solvent, or other HAP containing material recovered and shipped off site in gallons per month ( $S_m$ );

(e) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered and shipped off site in pounds per gallon ( $I_m$ );

(f) The facility total monthly emissions of each HAP in tons per month ( $E_x$ ), as calculated in I.A.2.b.(1);

(g) The total monthly HAP emissions from the facility in tons per month ( $E_{\text{hap}}$ ), as calculated in I.A.2.b.(3);

(h) The facility total emissions of each HAP in tons per year as calculated in I.A.2.b.(2).

(i) The total HAP emissions from the facility in tons per year as calculated in I.A.2.b.(4).

[s. NR 439.04(1)(d), Wis. Adm. Code]

**d. Reference Test Methods:**

(1) Reference Test Method for Hazardous Air Pollutant Emissions: Whenever compliance emission testing is required, a method approved by the Department in writing shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

### 3. Particulate Matter Emissions

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
(1) Total particulate matter emissions from all space heater included under <b>B02</b> may not exceed 0.28 pounds per hour. <sup>70</sup> [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(1) The permittee shall only fire natural gas and/or propane in the space heaters (B02). <sup>71</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(1) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
(2) Particulate matter emissions from each boiler may not exceed the following limitations: (a) <b>B22</b> : 0.06 pounds per hour (b) <b>B23</b> : 0.08 pounds per hour; (c) <b>B24</b> : 0.08 pounds per hour; and (d) <b>B25</b> : 0.05 pounds per hour. <sup>73</sup> [s. NR 415.06(1)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(2) The permittee shall only fire natural gas and/or propane in each boiler. <sup>74</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(2) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
(3) Particulate matter emissions from the roller coaters <b>P32</b> may not exceed 0.24 pounds per hour. <sup>76</sup> [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(3) The permittee shall only fire natural gas and/or propane in the curing ovens and thermal oxidizer associated with P32. <sup>77</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(3) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

<sup>70</sup> This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>71</sup> Because the emission limitation listed in I.A.3.a.(1) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

<sup>73</sup> These more restrictive limitations are necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>74</sup> Because the emission limitations listed in I.A.3.a.(2) are equal to the maximum theoretical emissions for each boiler while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

<sup>76</sup> This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>77</sup> Because the emission limitation in I.A.3.a.(3) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

<b>a. Particulate Matter Emission Limitations:</b>	<b>b. Compliance Demonstration Methods:</b>	<b>c. Record Keeping and Monitoring:</b>
<p><b>(4)</b> Particulate matter emissions from the metal spray booths <b>P33</b> may not exceed the most restrictive of:<sup>79</sup></p> <p>(a) 0.40 pounds per 1000 pounds gas;</p> <p>(b) <math>E = 3.59 P^{0.62}</math> where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(c) 0.91 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p><b>(4)</b> The permittee shall operate a paint overspray filter system on each spray booth (P33) to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p><b>(5)</b> The permittee shall maintain the pressure drop across each overspray filter system associated with P33 within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p><b>(4)</b> The permittee shall monitor and record the pressure drop across each paint overspray filter system associated with P33 once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p><b>(5)</b> Particulate matter emissions from the screening lines <b>P37</b> may not exceed 0.13 pounds per hour.<sup>80</sup> [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p><b>(6)</b> The permittee shall only fire natural gas and/or propane in the non-electric curing ovens.<sup>81</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p><b>(5)</b> The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p><b>(6)</b> Particulate matter emissions from the plastic spray booth <b>P57</b> may not exceed the most restrictive of:<sup>83</sup></p> <p>(a) 0.40 pounds per 1000 pounds gas;</p> <p>(b) <math>E = 3.59 P^{0.62}</math> where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(c) 0.06 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p><b>(7)</b> The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process (P57) is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p><b>(8)</b> The permittee shall maintain the pressure drop across the overspray filter system associated with P57 within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p><b>(6)</b> The permittee shall monitor and record the pressure drop across the paint overspray filter system associated with P57 once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>

<sup>79</sup> In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.1 tons per hour and a stack gas flow rate of 3700 ACFM. The limitation of 0.91 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>80</sup> This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>81</sup> Because the emission limitation in I.A.3.a.(5) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

<sup>83</sup> In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 1400 ACFM. The limitation of 0.06 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<b>a. Particulate Matter Emission Limitations:</b>	<b>b. Compliance Demonstration Methods:</b>	<b>c. Record Keeping and Monitoring:</b>
<p>(7) Particulate matter emissions from spray booth <b>P44</b> may not exceed the most restrictive of:<sup>85</sup></p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) <math>E = 3.59 P^{0.62}</math> where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 0.36 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(9) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever process P44 is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(10) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever process P44 is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(7) The permittee shall monitor and record the pressure drop across the paint overspray filter system associated with process P44 once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>(8) Particulate matter emissions from <b>P80</b> may not exceed 0.15 lbs/mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]</p>	<p>(11) The permittee shall only fire natural gas and/or propane in the non-electric curing ovens.<sup>51</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(8) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

**d. Reference Test Methods:**

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]

**4. Nitrogen Oxide Emissions**

**a. Limitations:**

(1) The permittee may not burn more than a total of 310,350 gallons of propane per month averaged over each 12 consecutive month period at the facility.<sup>27</sup> [s. 285.65(7), Wis. Adm. Code]

(2) Stacks S12, S13, S14, and S15 may not be equipped with rainhats or any other device that obstructs vertical discharge of the exhaust gas.<sup>28</sup> [s. 285.63(1)(b), Wis. Stats.]

<sup>85</sup> In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 2000 ACFM. The limitation of 0.36 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>51</sup> Because the emission limitation in I.A.3.a.(8) is less than the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

<sup>27</sup> The permittee elected the limitation in I.A.4.a.(1) in their original operation permit to restrict the facility wide potential nitrogen oxide emissions to less than the major source threshold level of 100 tons per year so that the facility is considered a synthetic minor non-Part 70 source. Because a number of nitrogen oxide emissions units have been removed this limitation is no longer necessary to limit facility wide potential nitrogen oxide emissions to less than 100 tons per year, however removing this limitation would result in an increase in emissions that would require a construction permit and this limitation may be necessary to ensure the NAAQS for nitrogen oxide is attained and maintained. Please refer to the compliance plan in condition I.18.c.(1) for more information.

<sup>28</sup> This requirement is necessary to ensure that the National Ambient Air Quality Standards for nitrogen oxides are attained and maintained.

**b. Compliance Demonstration Methods:**

(1) To demonstrate compliance with condition I.A.4.a.(1), the permittee shall calculate the total gallons of propane used at the facility, averaged over each 12 consecutive month period by dividing the total gallons of propane used during each consecutive 12 month period by 12. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) To demonstrate compliance with I.A.4.a.(2), the permittee shall maintain the records required by I.A.4.c.(2). [s. NR 407.09(4), Wis. Adm. Code]

**c. Record Keeping and Monitoring Requirements:**

(1) To demonstrate compliance status with condition I.A.4.a.(1), the permittee shall keep monthly records of:

- (a) The total gallons of propane used at the facility;
- (b) The gallons of propane used at the facility averaged over each 12 consecutive month period as calculated in condition I.A.4.b.(1).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall maintain records at the source that indicate stacks S12, S13, S14, and S15 have unobstructed vertical flow. [s. NR 439.04(1)(d), Wis. Adm. Code]

**d. Reference Test Methods:**

(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Methods 7 shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]

**5. Formaldehyde Emissions\***

**a. Limitations:**

(1) \* The permittee may not emit formaldehyde at a rate greater than 11.4 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]

**b. Compliance Demonstration Methods:**

(1) \* Each month the permittee shall calculate the total facility emissions of formaldehyde as follows:

$$E_{\text{form}} = [(V_1 \times W_1 \times F_1) + (V_2 \times W_2 \times F_2) + \dots + (V_n \times W_n \times F_n)] - [(R_1 \times G_1) + (R_2 \times G_2) + \dots + (R_m \times G_m)]$$

where:

$E_{\text{form}}$  is the monthly emissions of formaldehyde (pounds/month);

x identifies each HAP emitted from the facility

V is the monthly usage of each ink, coating, solvent, and other material containing formaldehyde used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other material containing formaldehyde used during the month (pounds/gallon);

F is the formaldehyde content of each ink, coating, solvent, or other material containing formaldehyde used during the month expressed as a weight fraction (i.e. if a material is 25% formaldehyde by weight F would be 0.25);

n identifies each ink, coating, solvent or other material containing formaldehyde used during the month;

R is the amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site (lbs/month);

G is the formaldehyde content of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site expressed as a weight fraction (i.e. if a spent material is 25% formaldehyde by weight G would be 0.25);

m identifies each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site during.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) \*To demonstrate compliance with condition I.A.5.a.(1), the permittee shall calculate the emissions of formaldehyde, averaged over each 12 consecutive month period by dividing the total monthly emissions of formaldehyde as calculated in I.A.5.b.(1) for each 12 consecutive month period by 12. This calculation shall be

performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

**c. Record Keeping and Monitoring Requirements:**

(1) \*The permittee shall keep monthly records of the following:

- (a) A unique name or identification number for each ink, coating, solvent, or other material containing formaldehyde used at the facility;
- (b) The weight fraction of formaldehyde ( $F_n$ ) of each ink, coating, solvent, or other material used at the facility;
- (c) The amount of each ink, coating, solvent, or other material containing formaldehyde used in gallons per month ( $V_n$ );
- (d) The density of each ink, coating, solvent, or other material containing formaldehyde used in pounds per gallon ( $W_n$ );
- (e) The amount of spent ink, coating, solvent, or other material containing formaldehyde recovered each month to be shipped off site in pounds per month ( $R_m$ );
- (f) The weight fraction of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site, expressed as a weight fraction ( $G_m$ );
- (g) The facility total monthly emissions of formaldehyde in pounds per month ( $E_{form}$ ), as calculated in I.A.5.b.(1); and
- (h) The total amount of formaldehyde emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.A.5.b.(2).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) \*The permittee shall use coating manufacturer's formulation data to determine the formaldehyde ( $F_n$ ) of the of the inks, coatings, solvents or other materials containing formaldehyde used at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) \*The permittee shall analyze the spent ink, coating, solvent and other materials containing formaldehyde recovered and shipped off site to determine the HAP content (G) no less than: (i) each time there is a change to materials or process operations that may affect the waste stream; or (ii) annually, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

**d. Reference Test Methods:**

(1) Reference Test Method for Formaldehyde Emissions: Whenever compliance emission testing is required, US EPA Method 0011 shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

**6. Visible Emissions**

**a. Limitations:**

(1) The visible emissions from each of the stacks exhausting B22, B23, B24, and B25 may not exceed 40% opacity. [s. NR 431.04(1), Wis. Adm. Code]

(2) The visible emissions from stacks exhausting the emissions units at the facility, excluding those listed in I.A.6.a.(1), may not exceed 20% opacity. [s. NR 431.05, Wis. Adm. Code]

**b. Compliance Demonstration Methods:**

(1) The compliance demonstration methods listed for particulate matter emissions in I.A.3.b.(1) through (13) shall also serve as compliance demonstration methods for the visible emissions limitations in I.A.6.a.(1) and (2). [s. NR 407.09(4), Wis. Adm. Code]

**c. Record Keeping and Monitoring Requirements:**

(1) The record keeping and monitoring requirements listed for particulate matter emissions in I.A.3.c.(1) through (8) shall also serve as the record keeping and monitoring requirements for the visible emission limitations in I.A.6.a.(1) and (2). [s. NR 407.09(1)(c)1., Wis. Adm. Code]

**d. Reference Test Methods:**

(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

## 7. Operational Flexibility

- a. **New Equipment Construction and Modification:** The permittee may commence construction or modification (but not operation) of new process equipment prior to obtaining a construction permit, provided the following conditions are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(1) The permittee shall submit the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department:

- (a) Two copies of a complete construction and operation permit application describing the proposed equipment;
- (b) An application fee of \$1350 or other amount as required by s. NR 410.03(1)(d), Wis. Adm. Code; and
- (c) Information describing how the interested persons group was notified of the proposed project. [ss. 299.80(10) and (11)(b), Wis. Stats.]

(2) The Department shall process the permit application in accordance with ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code, however, the permittee need not wait for permit issuance to commence construction. The Department shall process the permit application as both a construction permit and a significant revision to this operation permit and issue both permits simultaneously to reduce the administrative burden of issuing a construction permit that expires 18 months after issuance followed by an operation permit. The Department shall send an invoice outlining the fees required for processing the construction permit for the proposed project, including the fees for an expedited permit review authorized by s. NR 410.03(o), Wis. Adm. Code, less the \$1350 permit application fee. [ss. 299.80(2)(h), (4)(b), (10) and (11)(b), Wis. Stats.]

(3) The permittee shall pay the total amount of the fee invoice within 30 days of receipt.<sup>29</sup> [s. 299.80(10), Wis. Stats.]

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.<sup>30</sup> [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction of the equipment in question immediately.

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<sup>29</sup> Pursuant to s. 299.80(10), Wis. Stats., a participant in a cooperative agreement shall pay the same fees required under chs. 280 to 295, Wis. Stats. that it would be required to pay if it had not entered into a cooperative agreement. Therefore, while the requirement to obtain a construction permit prior to installation is waived, the permittee is still required to pay the fees that would have been assessed had a construction permit been issued under ch. NR 406, wis. Adm. Code.

<sup>30</sup> By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.7.b.(2)(a)(v) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

- b. New Equipment Operation:** The permittee may operate new process equipment, provided one of the following alternate scenarios are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

**(1) Alternate Scenario #1:** The permittee may operate new process equipment provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.7.a.(1) and the Department issues a construction permit pursuant to ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code. The permittee shall operate the new process equipment in compliance with the conditions contained in any construction permit issued by the Department. [s. NR 406.03, Wis. Adm. Code]

**(2) Alternate Scenario #2:** The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.7.a.(1) and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

- (a) The permittee shall submit two copies of the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department, 14 calendar days prior to the date of initial operation:
- (i) Information identifying all applicable requirements from the Wisconsin Statutes, Wisconsin Administrative Code, and federal Clean Air Act for the proposed equipment;
  - (ii) A quantification of the air pollution emissions that would result from the proposed project;
  - (iii) A computer dispersion modeling analysis showing the National Ambient Air Quality Standards will be protected if the proposed project results in an increase in potential particulate matter, sulfur dioxide, nitrogen oxide, and/or carbon monoxide emissions.
  - (iv) A computer dispersion modeling analysis showing the Acceptable Ambient Concentrations will be protected if the proposed project results in an increase in emissions of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code so that the resulting facility total emissions of the hazardous air pollutant are above the corresponding Table Value(s) **OR** results in the emission of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code that was not previously emitted, at a rate greater than its corresponding Table Value(s); and
  - (v) An analysis showing the proposed project will not cause the total facility wide potential emissions of particulate matter, sulfur dioxide, nitrogen oxides or carbon monoxide to exceed 100 tons per year. Any proposed new or relocated source that will result in the facility wide potential emissions of any one of these pollutants exceeding 100 tons per year is not eligible for this waiver. If the facility wide potential emissions of any one of the pollutants would be greater than 100 tons per year as the result of a proposed project, the permittee shall comply with the construction permit requirements outlined in ch. NR 406, Wis. Adm. Code and the significant operation permit revision requirements of s. NR 407.13, Wis. Adm. Code.<sup>31</sup>
- [ss. 299.80(10) and (11)(b), Wis. Stats.]
- (b) The Department has 14 calendar days from the date that all the information outlined in (a) is received to request additional information or object to the proposed project. If the Department requests additional information during the original 14 calendar day period the Department shall have an additional 7 calendar days from the date of receipt of the information to request additional information or object to the proposed project. Under no scenario shall the Department have less than 14 days to review original submittal. If the Department does not respond within 14 calendar days from the date that all the information outlined in (a) is submitted, or within 7 days from the date that any additional information requested by the Department is submitted, whichever is later, the permittee may commence initial operation of the proposed equipment. The Department may provide written approval to commence initial operation of the proposed equipment prior to the end of the 14 calendar day period. If this is the case the permittee may commence initial operation upon receipt of this written approval. [ss. 299.80(2)(h) and (11)(b), Wis. Stats.]

**(3) Alternate Scenario #3:** The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.7.a.(1) and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

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<sup>31</sup> This requirement is necessary because if the potential emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeds 100 tons the facility would be considered a major source for Part 70 purposes and would be required to obtain either a Part 70 source permit or a synthetic minor, non-Part 70 source permit containing conditions that limit the potential emissions of all criteria pollutants to less than 100 tons per year.

- (a) The Department provides written approval to commence initial operation of the proposed equipment. This written approval shall only be provided after the Department completes an air quality dispersion modeling analysis to ensure that the national ambient air quality standards and acceptable ambient concentrations will be protected while the proposed equipment is operating;
- (b) The permittee shall comply with any specific conditions included in the Department's written approval to commence initial operation;

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.<sup>32</sup> [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction and/or operation of the equipment in question immediately.

## **8. Facility Wide Reporting Requirements**

a. Submit the results of monitoring or a summary of monitoring results required by Part I.A. of this permit to the Department annually.

- (1) The time period to be addressed by the submittal are: January 1 to December 31.
- (2) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.
- (3) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.
- (4) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code]

b. Submit a certification of compliance with the requirements of Part I.A. of this permit to the Department annually.

- (1) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.
- (2) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 60 days after the end of each reporting period.
- (3) The information included in the report shall comply with the requirements of Part II Section N of this permit.
- (4) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(c), Wis. Adm. Code]

## **9. Compliance Testing Requirements**

a. Whenever compliance emission tests are required by the Department:

- (1) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing.

<sup>32</sup> By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.5.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

- (2) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing.
- (3) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing.
- (4) At the time of notification, a compliance test plan shall also be submitted for approval.
- (5) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests.

[s. NR 439.07, Wis. Adm. Code]

**B.** *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

**1. Process B02, Stack S02 - Natural Gas/Propane Space Heaters with a Total Rating of 33.4 mmBtu/hr - Installed 1994**

<b>POLLUTANT</b>	<b>(1) LIMITATIONS</b>	<b>(2) COMPLIANCE DEMONSTRATION METHODS</b>	<b>(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS</b>
<b>a.</b> Particulate Matter Emissions	<b>(a)</b> Total particulate matter emissions from all space heater included under B02 may not exceed 0.28 pounds per hour. <sup>33</sup> [s. NR 415.06(2)(a), Wis. Adm. Code]	<b>(a)</b> The permittee shall only fire natural gas and/or propane in the space heaters. <sup>34</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	<b>(a)</b> <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]  <b>(b)</b> The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
<b>b.</b> Visible Emissions	<b>(a)</b> 20% opacity [s. NR 431.05, Wis. Adm. Code]	<b>(a)</b> The permittee shall only fire natural gas and/or propane in the space heaters. <sup>36</sup> [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	<b>(a)</b> <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]  <b>(b)</b> The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility.. [s. NR 439.04(1)(d), Wis. Adm. Code]

<sup>33</sup> This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>34</sup> Because the emission limitation listed in I.B.1.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

<sup>36</sup> It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

2. **Boiler B22, Stack S12 - Natural Gas/Propane Boiler Rated at 8.4 mmBtu/hr - Installed 1961**  
**Boiler B23, Stack S13 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**  
**Boiler B24, Stack S14 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**  
**Boiler B25, Stack S15 - Natural Gas/Propane Boiler Rated at 6.3 mmBtu/hr - Installed 1961**

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions from each boiler may not exceed the following limitations: (i) B22: 0.06 pounds per hour (ii) B23: 0.08 pounds per hour; (iii) B24: 0.08 pounds per hour; and (iv) B25 0.05 pounds per hour. <sup>38</sup> [s. NR 415.06(1)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(a) The permittee shall only fire natural gas and/or propane in each boiler. <sup>39</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]  (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Visible Emissions	(a) 40% opacity [s. NR 431.04(1), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in each boiler. <sup>41</sup> [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]  (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
c. Nitrogen Oxides	(a) Stacks S12, S13, S14, and S15 may not be equipped with rainhats or any other device that obstructs vertical discharge of the exhaust gas. <sup>43</sup> [s. 285.63(1)(b), Wis. Stats.]	(a) To demonstrate compliance with I.B.2.c.(1)(a), the permittee shall maintain the records required by I.B.2.c.(3)(b). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Nitrogen Oxide Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 7 shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]  (b) The permittee shall maintain records at the source that indicate stacks S12, S13, S14, and S15 have unobstructed vertical flow. [s. NR 439.04(1)(d), Wis. Adm. Code]

<sup>38</sup> These more restrictive limitations are necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>39</sup> Because the emission limitations listed in I.B.2.b.(1)(a) are equal to the maximum theoretical emissions for each boiler while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

<sup>41</sup> It is not expected that the visible emission limitation of 40% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

<sup>43</sup> This requirement is necessary to ensure that the National Ambient Air Quality Standards for nitrogen oxides are attained and maintained.

3. Process P03, Stack S03 - 5 Lithographic Lines with UV Curing - Installed 1988

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) Emissions from each individual lithographic line included under P03 may never exceed 15 pounds in any day. [s. NR 424.03(1)(a)4., Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.3.a.(3)(c) to demonstrate compliance with I.B.3.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall maintain records that demonstrate the VOC emissions from each individual lithographic line included under P03 do not exceed 15 pounds in any day. [s. NR 439.04(3), Wis. Adm. Code]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

**4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 – Modified 2005 – (Only three coaters can be operated at a time)**

<b>POLLUTANT</b>	<b>(1) LIMITATIONS</b>	<b>(2) COMPLIANCE DEMONSTRATION METHODS</b>	<b>(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS</b>
<p><b>a. Particulate Matter Emissions</b></p>	<p>(a) Emissions may not exceed 0.24 pounds per hour.<sup>44</sup> [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing ovens and thermal oxidizer.<sup>45</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p><b>b. Volatile Organic Compounds</b></p> <p><i>Continued on Next Page...</i></p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <p>(i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings;</p> <p>(ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings;</p> <p>(iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code]</p>	<p>(a) The permittee shall comply with the limitations of I.B.4.b.(1)(a) by one of the following methods:</p> <p>(i) The application of low solvent content coating technology [ s. NR 422.04(2)(a), Wis. Adm. Code];</p> <p>(ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code]</p> <p>(iii) <i>Continued on Next Page...</i></p>	<p>(a) The permittee shall collect and record:</p> <p>(i) A unique name or identification number for each coating, as applied;</p> <p>(ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code]</p> <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<sup>44</sup> This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>45</sup> Because the emission limitation in I.B.4.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5.25 mmBtus/hr- Controlled by Thermal Oxidizer C18 - Modified 2005 – (Only three coaters can be operated at a time) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(b) SOLVENT WASHINGS. All VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.4.b.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p> <p>(c) The permittee may not coat paper or vinyl plastic with roll coaters P32. This requirement is necessary to avoid being subject to the requirements of s. NR 422.07 or NR 422.08. [s. 285.65(3), Wis. Stats.]</p> <p>(d) Only three roll coating machines may be used at a time. [s. 285.65(7), Wis. Stats.]</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P32 subject to the same numerical limit in I.B.4.b.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.4.b.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \frac{\sum_{i=1}^n C_i V_i}{V_T}$ <p>where:  VOC<sub>A</sub> is the volume-weighted average VOC content of 2 or more coatings applied on P32 during any day in pounds per gallon of coating, excluding water;  i is the subscript denoting an individual coating  n is the number of different coating subject to the same numerical emission limit applied during any day on P32;  C<sub>i</sub> is the VOC content of each coating (i) as applied during any day on P32 in pounds per gallon of coating, excluding water;  V<sub>i</sub> is the volume of each coating (i), excluding water, as applied during any day on the P32 in gallons;  V<sub>T</sub> is the total volume of all n coatings subject to the same numerical limit in I.B.4.b.(1)(a), excluding water, applied during any day on P32 in gallons. [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:  (i) The name or identification number of each coating applied on P32;  (ii) The volume of each coating applied in gallons, excluding water.  (iii) The daily volume-weighted average VOC content of all coatings applied on P32 as calculated under I.B.4.b.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code]</p> <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:  (i) The allowable emission rate from I.B.4.b.(1)(a) in pounds per gallon of coating, excluding water;  (ii) The amount of each coating in gallons, delivered to the applicator;  (iii) The volume fraction of solids in each coating delivered to the applicator;  (iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator;  (v) The total allowable emissions as calculated under I.B.4.b.(2)(b);  (vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.4.b.(2)(b) when considering the control device;  (vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation;  (viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages. [s. NR 439.04(5)(e), Wis. Adm. Code]</p>

4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 – Modified 1005 – (Only three coaters can be operated at a time) - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.4.b.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where:  E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P32.  i is the subscript denoting an individual coating;  n is the number of different coatings applied;  A<sub>i</sub> is the allowable emission rate from I.B.4.b.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator;  B<sub>i</sub> is the amount of coating in gallons, delivered to the applicator during the actual production day;  D<sub>i</sub> is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.4.b.(1)(a) calculated from:  <math>D_i = 1 - [A_i / P_i]</math>  where P<sub>i</sub> is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P.  [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than 1260 degrees F. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.4.b.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p>

4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5,25 mmBtus/hr - Controlled by Thermal Oxidizer C18 – Modified 2005 – (Only three coaters can be operated at a time) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Volatile Organic Compounds - (Continued)		<p>(d) Where the requirements of I.B.4.b.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p>(e) <u>Compliance Testing:</u> Compliance emission testing of the incinerator shall be conducted as follows:                      (i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations;                      (ii) In accordance with the compliance testing requirements in I.B.18.b.(1)(a). [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(h) The permittee shall retain copies of the results of the tests required by I.B.4.b.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing ovens and the thermal oxidizer. <sup>47</sup> [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<sup>47</sup> It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (P-33-18S-1B and P-33-18S-2B) - Installed 1993

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	<p>(a) Emissions may not exceed the most restrictive of:<sup>49</sup></p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) <math>E = 3.59 P^{0.62}</math> where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 0.91 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system on each spray booth to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across each overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>b. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <p>(i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings;</p> <p>(ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings;</p> <p>(iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code]</p>	<p>(a) The permittee shall comply with the limitations of I.B.5.b.(1)(a) by one of the following methods:</p> <p>(i) The application of low solvent content coating technology [ s. NR 422.04(2)(a), Wis. Adm. Code];</p> <p>(ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidation are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code]</p> <p>(iii) <i>Continued on Next Page...</i></p>	<p>(a) The permittee shall collect and record:</p> <p>(i) A unique name or identification number for each coating, as applied;</p> <p>(ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code]</p> <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<sup>49</sup> In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.1 tons per hour and a stack gas flow rate of 3700 ACFM. The limitation of 0.91 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(b) SOLVENT WASHINGS. All VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.5.b.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P33 subject to the same numerical limit in I.B.5.b.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.5.b.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \left[ \sum_{i=1}^n C_i V_i \right] / V_T$ <p>where:  VOC<sub>A</sub> is the volume-weighted average VOC content of 2 or more coatings applied on P33 during any day in pounds per gallon of coating, excluding water;  i is the subscript denoting an individual coating  n is the number of different coating subject to the same numerical emission limit applied during any day on P33;  C<sub>i</sub> is the VOC content of each coating (i) as applied during any day on P33 in pounds per gallon of coating, excluding water;  V<sub>i</sub> is the volume of each coating (i), excluding water, as applied during any day on the P33 in gallons;  V<sub>T</sub> is the total volume of all n coatings subject to the same numerical limit in I.B.5.b.(1)(a), excluding water, applied during any day on P33 in gallons.  [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:</p> <ul style="list-style-type: none"> <li>(i) The name or identification number of each coating applied on P33;</li> <li>(ii) The volume of each coating applied in gallons, excluding water.</li> <li>(iii) The daily volume-weighted average VOC content of all coatings applied on P33 as calculated under I.B.5.b.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code]</li> </ul> <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:</p> <ul style="list-style-type: none"> <li>(i) The allowable emission rate from I.B.5.b.(1)(a) in pounds per gallon of coating, excluding water;</li> <li>(ii) The amount of each coating in gallons, delivered to the applicator;</li> <li>(iii) The volume fraction of solids in each coating delivered to the applicator;</li> <li>(iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator;</li> <li>(v) The total allowable emissions as calculated under I.B.5.b.(2)(b);</li> <li>(vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.5.b.(2)(b) when considering the control device;</li> <li>(vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation;</li> <li>(viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages. [s. NR 439.04(5)(e), Wis. Adm. Code]</li> </ul>

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.5.b.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where:  E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P33.  i is the subscript denoting an individual coating;  n is the number of different coatings applied;  A<sub>i</sub> is the allowable emission rate from I.B.5.b.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator;  B<sub>i</sub> is the amount of coating in gallons, delivered to the applicator during the actual production day;  D<sub>i</sub> is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.5.b.(1)(a) calculated from:  <math>D_i = 1 - [A_i / P_i]</math>  where P<sub>i</sub> is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P.  [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than 1260 degrees F. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.5.b.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p>

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Volatile Organic Compounds - (Continued)		<p>(d) Where the requirements of I.B.5.b.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p>(e) <u>Compliance Testing:</u> Compliance emission testing of the incinerator shall be conducted as follows:                      (i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations;                      (ii) In accordance with the compliance testing requirements in I.B.18.b.(1)(a).                      [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(h) The permittee shall retain copies of the results of the tests required by I.B.5.b.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The compliance demonstration methods outlined in I.B.5.a.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.5.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The monitoring and records required by I.B.5.a.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]</p>

6. Process P37, Stack S53 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S, P-43-SOS, P171-SOS)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions may not exceed 0.13 pounds per hour. <sup>50</sup> [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(a) The permittee shall only fire natural gas and/or propane in the non-electric curing ovens. <sup>51</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]  (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Volatile Organic Compounds	(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings or inks with a VOC content greater than 6.9 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]	(a) The permittee shall maintain the records required by I.B.6.b.(3)(c) to demonstrate compliance with I.B.6.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]  (b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]  (c) The permittee shall keep the following records for each ink and other VOC containing materials used on P37: (i) A unique name of identification number for each ink and other VOC containing material, as applied; and (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]  (d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

<sup>50</sup> This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

<sup>51</sup> Because the emission limitation in I.B.6.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

6. Process P37, Stack S53 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S, P-43-SOS, P171-SOS) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing ovens. <sup>53</sup> [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	<p>(a) <u>Reference Test Method for Visible Emissions</u>: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<sup>53</sup> It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

7. Process P57, Stack S57 - Plastic Spray Booth (this booth uses same curing oven and thermal oxidizer used for P33) - (P-58-PBS)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed the most restrictive of:<sup>55</sup>                      (i) 0.40 pounds per 1000 pounds gas;                      (ii) <math>E = 3.59 P^{0.62}</math>                      where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or                      (iii) 0.06 pounds per hour.                      [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>b. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings or inks with a VOC content greater than 6.3 pounds per gallon as applied. [s. NR 424.03(2)(b), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.7.b.(3)(c) to demonstrate compliance with I.B.7.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P57:                      (a) A unique name of identification number for each ink and other VOC containing material, as applied; and                      (b) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon.                      [s. NR 439.04(1)(d), Wis. Adm. Code.]</p>

<sup>55</sup> In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 1400 ACFM. The limitation of 0.06 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

7. Process P57, Stack S57 - Plastic Spray Booth (this booth uses same curing oven and thermal oxidizer used for P33) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Volatile Organic Compounds - (Continued)			(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The compliance demonstration methods outlined in I.B.7.a.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.7.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]  (b) The monitoring and records required by I.B.7.a.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]

**8. Process P63, Stack S63 - Miscellaneous Facility Wide Cleanup**

**Because cleanup is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code. The cleanup solvent use is subject to general emission limitations for volatile organic compounds outline in ss. NR 419.03 and NR 419.04, Wis. Adm. Code which are included in Part II of this operation permit.**

9. Process P72, Stack S72 - Towel Dryer - Installed 1991

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) No person may cause, allow or permit organic compound emissions into the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution. [s. NR 419.03(1), Wis. Adm. Code]</p> <p>(b) No person may cause, allow or permit organic compounds to be used or handled without using good operating practices and taking reasonable precautions to prevent the spillage, escape or emission of organic compounds, solvents or mixtures. [s. NR 419.03(2), Wis. Adm. Code]</p> <p>(c) No person may cause, allow or permit the disposal of more than 1.5 gallons of any liquid VOC waste, or of any liquid, semisolid or solid waste materials containing more than 1.5 gallons of any VOC, in any one day from a facility in a manner that would permit their evaporation into the ambient air during the ozone season, except as provided for in s. NR 419.07. [s. NR 419.04(1), Wis. Adm. Code]</p> <p>(d) Disposal during the ozone season shall be by methods approved by the department, such as incineration, recovery for reuse, or transfer in closed containers to an acceptable disposal facility, such that the quantity of VOC which evaporates into the ambient air does not exceed 15% (by weight) or 1.5 gallons in any one day, whichever is larger. [s. NR 419.04(2), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.9.a.(3)(b) to demonstrate compliance with I.B.9.a.(1). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) For each batch of towels dried the permittee shall keep records of (i) the weight of the towels before drying; (ii) the weight of the towels after drying; and (iii) the calculated amount of VOCs that are emitted from the towel dryer. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

10. Process P41, Stack S41 - Two Litho Presses with Two UV Ovens - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from this process line may not exceed 1666 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) Each calendar month the permittee shall calculate the total volatile organic compound emissions from process P41 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n) +]$ <p>where:  <math>E_{\text{monthly}}</math> is the monthly VOC emissions (pounds/month);            U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used during the month (gallons/month);            W is the density of each ink, coating, clean-up solvent, or other VOC containing material used during the month (pounds/gallon);            G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content;            C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);            n identifies each ink, coating, clean-up solvent or other VOC containing material used during the month.</p> <p>This calculation shall be performed within fifteen calendar days of the end of each calendar month.</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content</u>: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the following:            (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on process P41;            (ii) The VOC content, expressed as a weight fraction (<math>C_n</math>) of each ink, coating, clean-up solvent, or other VOC containing material used on process P41;            (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used in gallons per month (<math>U_n</math>);            (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used in pounds per gallon (<math>W_n</math>);            (v) The G multiplier factor for the VOC in the material (<math>G_n</math>), including adequate documentation to show the derivation and appropriateness of the multiplier factor; and            (vi) The total monthly VOC emissions from process P41 in pounds per month (<math>E_{\text{monthly}}</math>), as calculated in I.B.10.a.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

11. Process P43, Stack S43 - One Screening Machines and Three Small Screening Machines with One Electric Drying Oven - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from this process line may not exceed 1666 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) Each calendar month the permittee shall calculate the total volatile organic compound emissions from process P43 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)]$ <p>where:  <math>E_{\text{monthly}}</math> is the monthly VOC emissions (pounds/month);            U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used during the month (gallons/month);            W is the density of each ink, coating, clean-up solvent, or other VOC containing material used during the month (pounds/gallon);            C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);            G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content; and            n identifies each ink, coating, clean-up solvent or other VOC containing material used during the month.</p> <p>This calculation shall be performed within fifteen calendar days of the end of each calendar month.</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content</u>: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the following:            (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on process P43;            (ii) The VOC content, expressed as a weight fraction (<math>C_n</math>) of each ink, coating, clean-up solvent, or other VOC containing material used on process P43;            (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used in gallons per month (<math>U_n</math>);            (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used in pounds per gallon (<math>W_n</math>);            (v) The G multiplier factor for the VOC in the material (<math>G_n</math>), including adequate documentation to show the derivation and appropriateness of the multiplier factor; and            (vi) The total monthly VOC emissions from process P43 in pounds per month (<math>E_{\text{monthly}}</math>), as calculated in I.B.11.a.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

12. Process P42, Stack S42 - Two Roll Coaters with Four Electric Drying Ovens - Utilized for R&D Activities - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>RACT Exemption</u>: This process is exempt from the requirements of ss. NR 422.04 to NR 422.155, Wis. Adm. Code provided:</p> <p>(i) The surface coating process sources are used exclusively for chemical and physical analysis or determination of product quality and commercial acceptance;</p> <p>(ii) The operation of the equipment is not an integral part of the production process; and</p> <p>(iii) The total emissions from R&amp;D activities (process P42 and P44 combined) do not exceed 800 pounds per calendar month.<sup>57</sup> [s. NR 422.03(5), Wis. Adm. Code]</p> <p>(b) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from processes P42 and P44 combined may not exceed 800 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.12.a.(3)(b) to demonstrate compliance with I.B.12.a.(1)(a) and (b). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep records to demonstrate that the volatile organic compound emissions from processes P42 and P44 combined are less than 800 pounds per calendar month. [s. NR 439.04(4), Wis. Adm. Code]</p>

<sup>57</sup> Note: For this process to be exempt from construction permit requirements, VOC emissions must not exceed 1666 pounds per month pursuant to s. NR 406.04(1)(g), Wis. Adm. Code.

13. Process P44, Stack S44 - Spraybooth - Utilized for R&D Activities - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>RACT Exemption</u>: This process is exempt from the requirements of ss. NR 422.04 to NR 422.155, Wis. Adm. Code provided:</p> <p>(i) The surface coating process sources are used exclusively for chemical and physical analysis or determination of product quality and commercial acceptance;</p> <p>(ii) The operation of the equipment is not an integral part of the production process; and</p> <p>(iii) The emissions from the source do not exceed 800 pounds per calendar month. [s. NR 422.03(5), Wis. Adm. Code]</p> <p>(b) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from processes P42 and P44 combined may not exceed 800 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.13.a.(3)(b) to demonstrate compliance with I.B.13.a.(1)(a) and (b). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep records to demonstrate that the volatile organic compound emissions from processes P42 and P44 combined is less than 800 pounds per calendar month. [s. NR 439.04(4), Wis. Adm. Code]</p>

13. Process P44, Stack S44 - Spraybooth - Utilized for R&D Activities - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>b.</b> Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed the most restrictive of:<sup>58</sup>                      (i) 0.40 pounds per 1000 pounds gas;                      (ii) <math>E = 3.59 P^{0.62}</math>                      where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or                      (iii) 0.36 pounds per hour.                      [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across the paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p><b>c.</b> Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The compliance demonstration methods outlined in I.B.13.b.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.13.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The monitoring and records required by I.B.13.b.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]</p>

<sup>58</sup> In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 2000 ACFM. The limitation of 0.36 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

**14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven**

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <p>(i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings;</p> <p>(ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings;</p> <p>(iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code]</p> <p>(b) SOLVENT WASHINGS. Whenever P75 is used to coat metal substrates, all VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.14.a.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p>	<p>(a) The permittee shall comply with the limitations of I.B.14.a.(1)(a) by one of the following methods:</p> <p>(i) The application of low solvent content coating technology [ s. NR 422.04(2)(a), Wis. Adm. Code];</p> <p>(ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code]</p> <p>(iii) <i>Continued on Next Page...</i></p>	<p>(a) The permittee shall collect and record:</p> <p>(i) A unique name or identification number for each coating, as applied;</p> <p>(ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code]</p> <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(c) The permittee may not coat paper or vinyl plastic with roll coaters P75. This requirement is necessary to avoid being subject to the requirements of s. NR 422.07 or NR 422.08. [s. 285.65(3), Wis. Stats.]</p> <p>(d) When coating plastic products, the permittee may not use more than 10,000 gallons of coating in any 12 consecutive months. [s. 285.65(7), Wis. Stats.]</p> <p>(e) When coating plastic parts, the permittee shall use the latest available control technique and operating practices (LACT):</p> <p>(i) the coatings applied may not contain more than 6.8 pounds of VOC per gallon.</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P75 subject to the same numerical limit in I.B.14.a.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.14.a.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \frac{\sum_{i=1}^n C_i V_i}{V_T}$ <p>where:  VOC<sub>A</sub> is the volume-weighted average VOC content of 2 or more coatings applied on P75 during any day in pounds per gallon of coating, excluding water;  i is the subscript denoting an individual coating  n is the number of different coating subject to the same numerical emission limit applied during any day on P75;  C<sub>i</sub> is the VOC content of each coating (i) as applied during any day on P75 in pounds per gallon of coating, excluding water;  V<sub>i</sub> is the volume of each coating (i), excluding water, as applied during any day on the P75 in gallons;  V<sub>T</sub> is the total volume of all n coatings subject to the same numerical limit in I.B.14.a.(1)(a), excluding water, applied during any day on P75 in gallons.  [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:</p> <p>(i) The name or identification number of each coating applied on P75;</p> <p>(ii) The volume of each coating applied in gallons, excluding water.</p> <p>(iii) The daily volume-weighted average VOC content of all coatings applied on P75 as calculated under I.B.14.a.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code]</p> <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:</p> <p>(i) The allowable emission rate from I.B.14.a.(1)(a) in pounds per gallon of coating, excluding water;</p> <p>(ii) The amount of each coating in gallons, delivered to the applicator;</p> <p>(iii) The volume fraction of solids in each coating delivered to the applicator;</p> <p>(iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator;</p> <p>(v) The total allowable emissions as calculated under I.B.14.a.(2)(b);</p> <p>(vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.14.a.(2)(b) when considering the control device;</p> <p>(vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation;</p> <p>(viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.  [s. NR 439.04(5)(e), Wis. Adm. Code]</p>

14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.14.a.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where:  E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P75.  i is the subscript denoting an individual coating;  n is the number of different coatings applied;  A<sub>i</sub> is the allowable emission rate from I.B.14.a.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator;  B<sub>i</sub> is the amount of coating in gallons, delivered to the applicator during the actual production day;  D<sub>i</sub> is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.14.a.(1)(a) calculated from:  <math>D_i = 1 - [A_i / P_i]</math>  where P<sub>i</sub> is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P.  [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than 1260 degrees F. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.14.a.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u>  Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(h) The permittee shall retain copies of the results of the tests required by I.B.14.a.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

**14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven**

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>a. Volatile Organic Compounds - (Continued)</b></p>		<p><b>(d)</b> Where the requirements of I.B.14.a.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p><b>(e) Compliance Testing:</b> Compliance emission testing of the incinerator shall be conducted as follows:                      (i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations;                      (ii) In accordance with the compliance testing requirements in I.B.18.b.(1)(a). [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p><b>(i)</b> The permittee shall keep and maintain monthly records of the amounts of coatings used in P75 when coating plastic parts. [s. NR 439.04, Wis. Adm. Code]</p> <p><b>(j)</b> The permittee shall keep and maintain monthly records of the VOC contents of coatings used in P75 when coating plastic parts. [s. NR 439.04, Wis. Adm. Code]</p> <p><b>(k)</b> The permittee shall maintain the material safety data sheets MSDS showing the VOC contents of the coatings and thinning solvents used to coat plastic parts in P75. [s. NR 439.04, Wis. Adm. Code]</p>
<p><b>b. Visible Emissions</b></p>	<p><b>(a)</b> 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p><b>(a)</b> The permittee shall only fire natural gas and/or propane in the curing ovens and the thermal oxidizer.<sup>60</sup> [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p><b>(a) Reference Test Method for Visible Emissions:</b> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p><b>(b)</b> The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<sup>60</sup> It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

15. Process P79, Stack S79 – 2 Screening Lines, One with 1 screening machine and 1 UV oven and One with 2 screening machines and 1 UV oven

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee may not use inks with a VOC content greater than 0.3 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.15.a.(3)(c) to demonstrate compliance with I.B.15.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P79:                      (i) A unique name of identification number for each ink and other VOC containing material, as applied; and                      (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon.                      [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

**16. Process P80, Stack S80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven**

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions may not exceed 0.15 lbs/mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the non-electric curing ovens. <sup>51</sup> [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]  (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Volatile Organic Compounds	(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings with a VOC content greater than 0.5 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]	(a) The permittee shall maintain the records required by I.B.16.b.(3)(c) to demonstrate compliance with I.B.16.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]  (b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]  (c) The permittee shall keep the following records for each ink and other VOC containing materials used on P80: (i) A unique name of identification number for each coating and other VOC containing material, as applied; and (ii) The VOC content of each coating and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]  (d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

<sup>51</sup> Because the emission limitation in I.B.16.a.(1)(a) is less than the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

**16. Process P80, Stack S80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven - (Continued)**

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing ovens. <sup>53</sup> [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions</u> : Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]  (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

<sup>53</sup> It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

17. Synthetic Minor Conditions Applicable to the Entire Facility

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) Volatile organic compound emissions from the entire facility may not exceed 8.01 tons per month averaged over each 12 consecutive month period. [s. 285.65(7), Wis. Stats.]</p>	<p>(a) For each day the permittee shall calculate the total volatile organic compound emissions from the facility as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{daily}} = (1 \text{ ton}/2000 \text{ lbs}) \times [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n) + (1 - O_{\text{eff}})(U_{\text{controlled}} \times W_{\text{controlled}} \times C_{\text{controlled}} \times G_{\text{controlled}})]$ <p>where:  <math>E_{\text{daily}}</math> is the daily VOC emissions (tons/day);  <math>U</math> is the daily usage of each ink, coating, solvent, or other VOC containing material used during the day (gallons/day);  <math>W</math> is the density of each ink, coating, solvent, or other VOC containing material used during the day (pounds/gallon);  <math>C</math> is the VOC content of each ink, coating, solvent, or other VOC containing material used during the day expressed as a weight fraction (i.e. if a material is 25% VOC by weight <math>C</math> would be 0.25);  <math>G</math> is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content;  <math>n</math> identifies each ink, coating, solvent or other VOC containing material used during the day;</p> <p>If the permittee wishes to take credit for VOCs controlled by the thermal oxidizer the following variables shall be included in the above equation:  <math>O_{\text{eff}}</math> is the control efficiency of the thermal oxidizer as established during the most recent stack test that demonstrated compliance with VOC emission limitations;  <math>U_{\text{controlled}}</math> is the daily usage of each ink, coating, solvent, or other VOC containing material used on processes controlled by the thermal oxidizer (gallons/day);  <math>W_{\text{controlled}}</math> is the density of each ink, coating, solvent, or other VOC containing material used on processes controlled by the thermal oxidizer (pounds/gallons);  <math>C_{\text{controlled}}</math> is the VOC content of each ink, coating, solvent, or other VOC containing material used on processes controlled by the thermal oxidizer expressed as a weight fraction; and  <math>G_{\text{controlled}}</math> is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content.</p>	<p>(a) The permittee shall keep daily records of the following:            (i) A unique name or identification number for each ink, coating, solvent, or other VOC containing material used at the facility;            (ii) The VOC content, expressed as a weight fraction (<math>C_n</math>) of each ink, coating, solvent, or other VOC containing material used at the facility;            (iii) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per day (<math>U_n</math>);            (iv) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (<math>W_n</math>);            (v) The <math>G</math> multiplier factor for the VOC in the material (<math>G_n</math>), including adequate documentation to show the derivation and appropriateness of the multiplier factor; and            (vi) The total daily VOC emissions from the facility in tons per day (<math>E_{\text{daily}}</math>), as calculated in I.B.17.a.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

**17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued**

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>a. Volatile Organic Compounds - (Continued)</b></p>		<p><b>(b)</b> For each calendar month the permittee shall calculate the total monthly VOC emissions as follows. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = \Sigma E_{\text{daily}} - \{(1 \text{ ton}/2000 \text{ lbs}) \times [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]\}$ <p>where:  <math>E_{\text{monthly}}</math> is the monthly VOC emissions (tons/month) taking into account credit for the waste solvents that are collected and shipped off site for disposal;  <math>\Sigma E_{\text{daily}}</math> is the sum of the daily VOC emissions calculated in I.B.17.a.(2)(a) totaled for the calendar month;  <math>S</math> is the amount of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site (gallons/month);  <math>P</math> is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon;  <math>m</math> identifies each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site.</p> <p><b>(c)</b> To demonstrate compliance with condition I.B.17.a.(1)(a), the permittee shall calculate the total tons of volatile organic compound emissions from the facility, averaged over each 12 consecutive month period by dividing the total monthly volatile organic compound emissions as calculated in I.B.17.b.(2)(b) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p><b>(b)</b> The permittee shall keep monthly records of:            (i) The monthly sum of the daily VOC emissions as calculated in I.B.17.a.(2)(b), (<math>3E_{\text{daily}}</math>);            (ii) The amount of spent ink, coating, solvent, or other VOC containing material recovered each month and shipped off site in gallons per month (<math>S_m</math>);            (iii) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon (<math>P_m</math>);            (iv) The total monthly VOC emissions from the facility in tons per month as calculated in I.B.17.a.(2)(b), (<math>E_{\text{monthly}}</math>); and            (v) The total amount of VOC emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.a.(2)(c). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p><b>(c)</b> The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (<math>C_n</math>) and the density (<math>W_n</math>) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p><b>(d)</b> The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (<math>P</math>) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

**17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued**

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>b.</b> Hazardous Air Pollutants Regulated by the Clean Air Act</p> <p><i>Continued on Next Page...</i></p>	<p><b>(a)</b> The permittee may not emit any single hazardous air pollutant regulated by the Clean Air Act at a rate greater than 0.83 tons per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p> <p><b>(b)</b> The permittee may not emit a total of all hazardous air pollutants regulated by the Clean Air Act combined at a rate greater than 2.08 tons per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p>	<p><b>(a)</b> For each day the permittee shall calculate the total facility emissions of <u>each hazardous air pollutant</u> regulated by the Clean Air Act as follows:<sup>67</sup></p> $E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1 \times F_1) + (U_2 \times W_2 \times H_2 \times F_2) + \dots + (U_n \times W_n \times H_n \times F_n)] + (1 - O_{\text{eff}})(U_{\text{controlled}} \times W_{\text{controlled}} \times H_{\text{controlled}} \times F_{\text{controlled}})\}$ <p>where:  <math>E_x</math> is the daily emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/day);  <math>x</math> identifies each HAP emitted from the facility  <math>U</math> is the daily usage of each ink, coating, solvent, or other HAP containing material used during the day (gallons/day);  <math>W</math> is the density of each ink, coating, solvent, or other HAP containing material used during the day (pounds/gallon);  <math>H</math> is the HAP content of each ink, coating, solvent, or other HAP containing material used during the day expressed as a weight fraction (i.e. if a material is 25% HAP by weight <math>H</math> would be 0.25);  <math>F</math> is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content. For those HAP containing materials for which the HAP is 100% emitted, <math>F</math> equals 1 and does not have to be specifically considered in the equation.;  <math>n</math> identifies each ink, coating, solvent or other HAP containing material used during the day;</p>	<p><b>(a)</b> The permittee shall keep daily records of the following:</p> <ul style="list-style-type: none"> <li>(i) A unique name or identification number for each ink, coating, solvent, or other HAP containing material used at the facility;</li> <li>(ii) The weight fraction of each HAP contained in the material (<math>H_n</math>) of each ink, coating, solvent, or other HAP containing material used at the facility;</li> <li>(iii) The <math>F</math> multiplier factor for the HAP in the material (<math>F_n</math>), including adequate documentation to show the derivation and appropriateness of the multiplier factor;</li> <li>(iv) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per day (<math>U_n</math>);</li> <li>(v) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (<math>W_n</math>);</li> <li>(vi) The facility total daily emissions of each HAP in tons per day (<math>E_x</math>), as calculated in I.B.17.b.(2)(a); and</li> <li>(vii) The total daily HAP emissions from the facility in tons per day (<math>E_{\text{hap}}</math>), as calculated in I.B.17..b.(2)(d).</li> </ul> <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<sup>67</sup> This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>b. Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</b></p> <p><i>Continued on Next Page...</i></p>		<p>If the permittee wishes to take credit for HAPs controlled by the thermal oxidizer the following variables shall be included in the above equation:  <math>O_{eff}</math> is the control efficiency of the thermal oxidizer as established during the most recent stack test that demonstrated compliance with VOC emission limitations;  <math>U_{controlled}</math> is the daily usage of each ink, coating, solvent, or other HAP containing material used on processes controlled by the thermal oxidizer (gallons/day);  <math>W_{controlled}</math> is the density of each ink, coating, solvent, or other HAP containing material used on processes controlled by the thermal oxidizer (pounds/gallons);  <math>H_{controlled}</math> is the VOC content of each ink, coating, solvent, or other HAP containing material used on processes controlled by the thermal oxidizer expressed as a weight fraction; and  <math>F_{controlled}</math> is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p><b>(b)</b> For each calendar month the permittee shall calculate the total monthly as emissions of <u>each</u> hazardous air pollutant regulated by the Clean Air Act as follows. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_y = (\sum E_x)_i - \{(1 \text{ ton}/2000 \text{ lbs}) \times [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$ <p>where:  <math>E_y</math> is the monthly emissions of each HAP (tons/month) taking into account credit for the waste solvents that are collected and shipped off site for disposal;  <math>(\sum E_x)_i</math> is the sum of the daily emissions of <u>each</u> HAP (i) calculated in I.B.17.b.(2)(a) totaled for the calendar month;  <math>S</math> is the amount of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site (gallons/month);  <math>I</math> is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon;  <math>m</math> identifies each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site.</p>	<p><b>(b)</b> The permittee shall keep monthly records of:</p> <ul style="list-style-type: none"> <li>(i) The monthly sum of the daily emissions of each HAP regulated by the Clean Air Act as calculated in I.B.17.b.(2)(b), <math>(\sum E_x)_i</math>;</li> <li>(ii) The amount of spent ink, coating, solvent, or other HAP containing material recovered each month and shipped off site in gallons per month (<math>S_m</math>);</li> <li>(iii) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon (<math>I_m</math>);</li> <li>(iv) The total monthly emissions of each HAP in tons per month as calculated in I.B.17.b.(2)(b), (<math>E_y</math>);</li> <li>(v) The total amount of each HAP emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.b.(2)(c);</li> <li>(vi) The total monthly emissions of all HAPs combined in tons per month as calculated in I.B.17.b.(2)(e); and</li> <li>(vii) The total amount of all HAPs combined emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.b.(2)(f).</li> </ul> <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>b.</b> Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</p>		<p>(e) To demonstrate compliance with condition I.B.17.b.(1)(a), the permittee shall calculate the emissions of <u>each</u> hazardous air pollutant regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.B.17.b.(2)(b) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(d) Each day the permittee shall calculate the <u>total</u> emissions of hazardous air pollutants regulated by the Clean Air Act as follows:</p> $E_{hap} = \sum E_x$ <p>where:  <math>E_{hap}</math> is the daily total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/day);  <math>E_x</math> is the daily emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/day) as calculated in I.B.17.b.(1)(a);  x identifies each HAP emitted from the facility.  [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(e) For each calendar month the permittee shall total the daily emissions of <u>all</u> hazardous air pollutant regulated by the Clean Air Act combined by totaling the monthly emissions of each HAP (<math>E_x</math>) as calculated in I.B.17.b.(2)(b) to determine the monthly emissions in tons per month. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(f) To demonstrate compliance with condition I.B.17.b.(1)(b), the permittee shall calculate the total emissions of <u>all</u> hazardous air pollutants regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.B.17.b.(2)(e) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(c) The permittee shall use coating manufacturer's formulation data to determine the HAP content (<math>H_n</math>) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>c. *</b> Formaldehyde</p> <p><i>Continued on Next Page...</i></p>	<p><b>(a) *</b> The permittee may not emit formaldehyde at a rate greater than 11.4 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p>	<p><b>(a) *</b> Each month the permittee shall calculate the total facility emissions of formaldehyde as follows:</p> $E_{\text{form}} = [(V_1 \times W_1 \times F_1) + (V_2 \times W_2 \times F_2) + \dots + (V_n \times W_n \times F_n)] - [(R_1 \times G_1) + (R_2 \times G_2) + \dots + (R_m \times G_m)]$ <p>where:  <math>E_{\text{form}}</math> is the monthly emissions of formaldehyde (pounds/month);  V is the monthly usage of each ink, coating, solvent, and other material containing formaldehyde used during the month (gallons/month);  W is the density of each ink, coating, solvent, or other material containing formaldehyde used during the month (pounds/gallon);  F is the formaldehyde content of each ink, coating, solvent, or other material containing formaldehyde used during the month expressed as a weight fraction (i.e. if a material is 25% formaldehyde by weight F would be 0.25);  n identifies each ink, coating, solvent or other material containing formaldehyde used during the month;  R is the amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site (gallons/month);  G is the formaldehyde content of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site in pounds per gallon;  m identifies each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site during.  [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p><b>(b) *</b>To demonstrate compliance with condition I.B.17.c.(1)(a), the permittee shall calculate the emissions of formaldehyde, averaged over each 12 consecutive month period by dividing the total monthly emissions of formaldehyde as calculated in I.B.17.c.(2)(a) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p><b>(a) *</b>The permittee shall keep monthly records of the following:</p> <ul style="list-style-type: none"> <li>(i) A unique name or identification number for each ink, coating, solvent, or other material containing formaldehyde used at the facility;</li> <li>(ii) The weight fraction of formaldehyde (<math>F_n</math>) of each ink, coating, solvent, or other material used at the facility;</li> <li>(iii) The amount of each ink, coating, solvent, or other material containing formaldehyde used in gallons per month (<math>V_n</math>);</li> <li>(iv) The density of each ink, coating, solvent, or other material containing formaldehyde used in pounds per gallon (<math>W_n</math>);</li> <li>(v) The amount of spent ink, coating, solvent, or other material containing formaldehyde recovered each month and shipped off site in gallons per month (<math>R_m</math>);</li> <li>(vi) The amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site in pounds per gallon (<math>G_m</math>);</li> <li>(vii) The facility total monthly emissions of formaldehyde in pounds per month (<math>E_{\text{form}}</math>), as calculated in I.B.17.c.(2)(a); and</li> <li>(viii) The total amount of formaldehyde emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.c.(2)(b).</li> </ul> <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p><b>c. *</b> Formaldehyde - (Continued)</p>			<p><b>(b)</b> *The permittee shall use coating manufacturer's formulation data to determine the formaldehyde (<math>F_n</math>) of the of the inks, coatings, solvents or other materials containing formaldehyde used at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p><b>(c)</b> *The permittee shall analyze the spent ink, coating, solvent and other materials containing formaldehyde recovered and shipped off site to determine the HAP content (G) no less than: (i) each time there is a change to materials or process operations that may affect the waste stream; or (ii) annually, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p><b>(d)</b> <u>Reference Test Method for Formaldehyde Emissions:</u> Whenever compliance emission testing is required, US EPA Method 0011 shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]</p>
<p><b>d.</b> Nitrogen Oxides</p>	<p><b>(a)</b> The permittee may not burn more than a total of 310,350 gallons of propane per month averaged over each 12 consecutive month period at the facility.<sup>68</sup> [s. 285.65(7), Wis. Adm. Code]</p>	<p><b>(a)</b> To demonstrate compliance with condition I.B.17.d.(1)(a), the permittee shall calculate the total gallons of propane used at the facility, averaged over each 12 consecutive month period by dividing the total gallons of propane used during each consecutive 12 month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p><b>(a)</b> <u>Reference Test Method for Nitrogen Oxide Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 7 shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]</p> <p><b>(b)</b> To demonstrate compliance status with condition I.B.17.d.(1)(a), the permittee shall keep monthly records of:</p> <p>(i) The total gallons of propane used at the facility;</p> <p>(ii) The gallons of propane used at the facility averaged over each 12 consecutive month period as calculated in condition I.B.17.d.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<sup>68</sup> The permittee elected the limitation in I.B.17.d.(1)(a) in their original operation permit to restrict the facility wide potential nitrogen oxide emissions to less than the major source threshold level of 100 tons per year so that the facility is considered a synthetic minor non-Part 70 source. Because a number of nitrogen oxide emissions units have been removed this limitation is no longer necessary to limit facility wide potential nitrogen oxide emissions to less than 100 tons per year, however removing this limitation would result in an increase in emissions that would require a construction permit and this limitation may be necessary to ensure the NAAQS for nitrogen oxide is attained and maintained. Please refer to the compliance plan in condition I.18.c.(1) for more information.

**18. Conditions Applicable to the Entire Facility**

<b>CONDITION TYPE</b>	<b>(1) CONDITIONS</b>
<b>a. Reporting</b>	<p><b>(a)</b> Submit the results of monitoring or a summary of monitoring results required by this permit to the Department annually.</p> <p>(i) The time period to be addressed by the submittal are: January 1 to December 31.</p> <p>(ii) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.</p> <p>(iii) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.</p> <p>(iv) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code]</p> <p><b>(b)</b> Submit a certification of compliance with the requirements of this permit to the Department annually.</p> <p>(i) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.</p> <p>(ii) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.</p> <p>(iii) The information included in the report shall comply with the requirements of Part II Section N of this permit.</p> <p>(iv) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(c), Wis. Adm. Code]</p>
<b>b. Compliance Testing</b>	<p><b>(a)</b> Whenever compliance emission tests are required by the Department:</p> <p>(i) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing.</p> <p>(ii) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing.</p> <p>(iii) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing.</p> <p>(iv) At the time of notification, a compliance test plan shall also be submitted for approval.</p> <p>(v) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests. [s. NR 439.07, Wis. Adm. Code]</p>