

**DEPARTMENT OF NATURAL RESOURCES
FULL AIR COMPLIANCE EVALUATION (FCE) SUMMARY**

FID: 154062150	FCE/SITE VISIT DATE: 4/26/2018	
	<input checked="" type="checkbox"/> EPA Committed FCE <input type="checkbox"/> Uncommitted FCE	Announced Inspection <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
FACILITY NAME AND LOCATION: Evonik Materials Corp 337 Vincent Street Milton, WI 53563-1146	EPA CLASS TYPE: Major Source - A	
COUNTY: Rock	SIC AND NAICS CODES AND DESCRIPTIONS: SIC: 2843, Surface Active Agents NAICS: 325613, Surface Active Agent Manufacturing	
INSPECTION PARTICIPANTS: Sondra Klipp – Evonik Environmental Manager David Ausloos – Production Manager Samuel Saeian – WDNR	APPLICABLE AIR PROGRAMS:	
	<u>Prog./Pmt. Code:</u> NR 445 <input checked="" type="checkbox"/> NSR <input type="checkbox"/> PSD <input type="checkbox"/> P60 NSPS <input checked="" type="checkbox"/>	P61 NESHAP <input type="checkbox"/> P62 MACT <input type="checkbox"/> P63 NESHAP MACT <input checked="" type="checkbox"/> P63 NESHAP GACT <input type="checkbox"/>
Credentials Shown: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

TOTAL REPORTED ACTUAL FACILITY EMISSIONS IN TONS/YEAR*:

	PM	SO ₂	NO _x	VOC	CO	PM10	HAP
2016	1.20	BRL	2.48	7.57	2.08	1.02	5.20
2015	1.23	BRL	3.10	9.42	2.61	1.06	8.53
2014	1.12	BRL	1.96	9.90	1.65	0.97	9.26
Class Code	B	B	B	SM	B	B	SM80
Attainment Status	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment

*Emission data above is from the emission inventory. BRL means Below Reporting Levels.

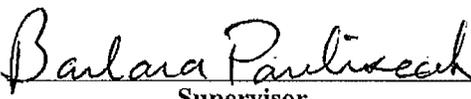
IS FACILITY IN COMPLIANCE WITH ALL WISCONSIN AIR REGULATIONS?

Yes No Additional Information Is Needed Before This Determination Can Be Made.

Are permit revisions needed? Yes No (If yes - see revisions section)

INSPECTOR SIGNATURE: 
TITLE: Air Management Engineer

SIGNATURE DATE: 5/22/2018

SUPERVISOR SIGNATURE: 
TITLE: Supervisor

SIGNATURE DATE: 5/22/2018

Cc: Bureau of Air Management - Compliance, AM/7
Facility

FACILITY INFORMATION

FACILITY CONTACT: Name: Sondra Klipp, Senior Environmental Specialist	FACILITY CONTACT PHONE/EMAIL: Phone: 608-868-8225 E-mail: Sondra.klipp@evonik.com
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FACILITY AIR PROGRAMS:

Air Program	Subpart	Citation	Facility or Process
New Source Performance Standards (P60 NSPS/SIP)	Dc	NSPS for Industrial-Commercial-Institutional Steam Generating Units constructed after June 9, 1989	B02/S12 and B03/S13
Part 70 Permit (Major Facility)	40 CFR 70.3	Pursuant to 40 CFR s. 63.11494(e)	Facility
P63 NESHAP GACT	VVVVVV	Chemical Manufacturing Area Sources (63.11494-63.11503)	Chemical Manufacturing Process Units (CMPUs) with ethylene dichloride and/or metal HAPs listed in Table 2 to Subpart VVVVVV of Part 63

Historical Summary of Permits/Orders Issued to the Facility.

Permit/Order Number	Issued/Appr.	Sources covered and desc. ¹	Permit Status
154062150-P12	03/06/2017	Total Facility ¹ – updated CAM plan	Primary enforceable document
154062150-P11	04/28/2015	Total Facility ¹ – updated CAM plan	Revised by 154062150-P12
154062150-P10	04/28/2015	Total Facility ¹	Revised by 154062150-P11
11-KLH-039-EXM	03/04/2011	Adding of 12000 gallon blend tank TK201	Adopted by 154062150-P10
10-SML-017-EXM	02/19/2010	Changing of relief valve setting on the ethylene oxide storage tank, tank T111	Adopted by 154062150-P10
10-KLH-232-EXM	12/1/2010	Replacement of blend tank TK201 by tank TK209	Adopted by 154062150-P10
09-SML-171-EXM	08/25/2009	Modification of vent on tank TK155	Adopted by 154062150-P10
09-SML-151-EXM	07/14/2009	Manufacture of Versalink C138, a new product, in reactors R-1 and R-2	Adopted by 154062150-P10
07-SML-200 (EXM)	07/24/2007	Exemption – construct a 14,000 gallon storage tank for dimethylaminopropylamine	Adopted by 154062150-P10
06-KLH-325 (EXM)	11/29/2006	Exemption – construction of a new tank wagon loading bay to be part of process P31 and modification of reactors R-5 and R-7	Adopted by 154062150-P10
06-KLH-274 (EXM)	10/02/2006	Exemption – modification of reactor R-6	Adopted by 154062150-P10
06-KLH-035 (EXM)	02/22/2006	Exemption – 5 DOT isocontainers for product storage	Adopted by 154062150-P10
98-KLH-921	07/27/2004	Construct a hydrogenation reactor (extension 1/30/06)	Adopted by 154062150-P10
154062150-F01	05/30/2002	Total Facility ¹	Renewed by 154062150-P10
98-POY-018	06/26/1998	Construct an ethylene oxide storage tank (T111) and two ethylene oxide intermediate transfer tanks (T112 & T113).	Adopted by 154062150-F01
95-RV-002	06/26/1995	Construct three new process reactors – P60 (R-6), P70 (R-7) & P02 (R-2)	Adopted by 154062150-F01
93-KLH-411A	08/1/1994	Revision - change in ownership.	Adopted by 154062150-F01
93-KLH-411	01/07/1994	Construct an above ground acrylonitrile storage tank (T06).	Adopted by 154062150-F01
91-DCF-173A		Revision - change in ownership.	Adopted by 154062150-F01
91-DCF-173	08/31/1992	Modify reactor R-5 (P25) and construct a hazardous air pollutant control system (C702 – cryogenic condenser).	Adopted by 154062150-F01

Permit/Order Number	Issued/Apppr.	Sources covered and desc. ¹	Permit Status
90-IRS-141	02/11/1991	Construct a new reactor (P03/S03) and modify an existing ammonia recovery system.	Adopted by 154062150-F01

¹ - Total Facility refers to all existing units at the facility at the time of issuance of the permit listed.

FACILITY DESCRIPTION:

Evonik materials Corp, Inc. is a gas and chemical company. The permittee uses natural and synthetic alcohols, oils and fatty acids to manufacture a wide range of amines and amine derivatives. These materials are commonly known as cationic and amphoteric surfactants. Products are used as components in household, industrial, and institutional cleaners as well as mining, roof coatings, asphalt, and other industrial applications.

Stack and Process Index.

B02/S12 - Natural Gas Fired Boiler Rated at 12.6 mmBTU/hr. Last Constructed/Modified 1990.

B03/S13 - Natural Gas Fired Boiler Rated at 14.5 mmBTU/hr. Last Modified 1996.

P08/S08 - 11 Blend Tanks. Last Constructed/Modified 1980.

P09/S09 - Process Drumming Hood. Last Constructed/Modified 2000

P31/S31 - Tankwagon Loading. Last Constructed/Modified 2006.

P01 - Amine Derivatives Reactor R-1 and ancillary equipment including D-126. Last Constructed/Modified 1973.

P02 - Hydrogenation and Derivatives Reactor R-2 and ancillary equipment including TK 805 and D-126. Last Constructed/Modified June 26, 1995.

P03 - Hydrogenation Reactor R-3 and ancillary equipment including TK 805 and D-3. Last Constructed/Modified 1978.

P04 – Intermediate s and Amine Derivative Reactor R-4. Last Constructed/Modified – 1978.

P13 - Hydrogenation Reactor R-5 and ancillary equipment including TK 805 and D-5. Last Constructed/Modified August 31, 1992.

P60 - Batch Chemical Reactor R-6 and ancillary equipment including D-6. Last Constructed/Modified 2006.

P70 - Hydrogenation Reactor R-7 and ancillary equipment including TK 807 and D-7. Last Constructed/Modified June 26, 1997.

P80 - Hydrogenation Reactor R-8 and ancillary equipment including TK 808, D-8. October 2005.

Emissions from P01, P02, P03, P04, P08, P13, P31, P60, P70 and P80 are controlled using Cryogenic Condenser C70 or Ammonia Control System C80/S80 , as appropriate.

P99/S99 - Fugitives Emissions from Equipment Leaks.

T03 - Propylene Oxide Storage Tank

T06 - Acrylonitrile Storage Tank

T11 - Ethylene Oxide Storage Tank

T112 - Ethylene Oxide Intermediate Transfer Tanks

T92 - Hazardous Waste Storage Tank

Emissions from T03, T06, and T92 are controlled using Cryogenic Condensation System C70/S70.

T30 - 32 Swing tanks storing various chemicals including Nitriles, Amines, and Alcohols; and 7 Isocontainers used as storage tanks – 2006. Emissions are control with C80 when the stored chemical products contains greater 1% of ammonia.

TK 315 - Aqueous Ammonia Storage Tank. Last Constructed/Modified 1994.

TK 316 - Aqueous Ammonia Storage Tank. Last Constructed/Modified 1992.

TK800 – Anhydrous Ammonia Storage Tank. Last Constructed/Modified 2014.

Emissions from TK315, TK316, and TK800 are controlled using Ammonia Control System C80/S80.

Insignificant Emissions Units.

Maintenance of grounds, equipment, and buildings

Stockpiled contaminated soils

Boiler, turbine, and HVAC system maintenance

Pollution control equipment maintenance

Internal combustion engine used for warehouse and material transfers

Fire control equipment

Janitorial services

Office activities

Convenience water heating
 Convenience space heating (< 5 mmBTU/hr)
 Demineralization and oxygen scavenging of water for boilers
 Sanitary sewer and plumbing venting
 10,000 gallon cooling tower
 Wastewater sump
 Research and development facilities
 Quality control lab
 P10 - Charging Process Vessels from Drums

The following tanks/vessel are insignificant source of emission:

Vessel	Capacity (gal)	Material Stored
TK101	30000	Methyl chloride
TK115 (T02)	7600	Diethylene triamine
TK120	14100	Wastewater
TK130	11600	Tallow diamine
TK135	11600	Hard tallow amine
TK140	11600	Coconut Oil
TK145 (T04)	10000	Glacial acetic acid
TK170	15000	Soya amine
TK155 (T01)	8500	Isopropyl alcohol
TK165	11375	Amine
TK900	9000	Nitrogen by VOC
TKs 601, 602 A, and 602 B	15000, 8000, and 8000	Wastewater
TK904	3000	Nitrogen
TK905	12000	Hydrogen
TK 900	500	Nitrogen
TK 175	14,000	Dimethylaminopropylamine
TK 207		Noon volatile Amine
TK 706	260	Condensate – Hazardous Waste
D802	1000	Hazardous Waste

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: None.

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.

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. **Compliance**

PART III - This section contains the requirements of 40 CFR 64 Compliance Assurance Monitoring (CAM) must be abide by. **Compliance**

PART I

APPLICABLE LIMITATIONS AND SPECIFIC CONDITIONS

A. B02/S12 Natural Gas Fired Boiler Rated at 12.6 mmBTU/hr. Constructed/ Last Modified 1990; and B03/S13 - Natural Gas Fired Boiler Rated at 14.5 mmBTU/hr. Constructed/Last Modified 1996. These boilers are subject to the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units.

1. Particulate Matter Emissions (PM/PM₁₀).		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) PM emissions may not exceed 0.15 lb/mmBTU. [s. NR 415.06(2)(a), Wis. Adm. Code] Compliance</p> <p>(2) PM₁₀ emissions from the boilers may not exceed the following: ¹</p> <p>(a) 0.091 lb/hr for S12 and 0.105 lb/hr from S13 [ss. NR 404.04(8) and 404.05(3), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.] Compliance</p> <p>(2) For the Stacks S12 and S13 ²:</p> <p>(a) The stack heights shall be at least 21.0 feet for S12 and 23 ft for S13 above ground level;</p> <p>(b) The stack inside diameter at the outlet may not exceed 2.0 ft for S12 and 2.0 ft for S13; and</p> <p>(c) Stack S13 may not be equipped with a rainhat or other device, which impedes the upward flow of the exhaust gases.</p> <p>[s. 285.63(1)(a) and 285.65(3), Wis. Stats.] Compliance</p>	<p>(1) The permittee shall fire only natural gas in these boilers. ³ [s. NR 407.09(1)(c)1.b., Wis. Adm. Code, ss. 285.65(3) and 285.65(1)(a), Wis. Stats.] Compliance – The permittee only uses natural gas in these two natural gas boilers.</p>	<p>(1) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Method 5, including condensable backhalf emissions, shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] Compliance</p> <p>(2) Whenever compliance emission testing for PM₁₀ is required, the permittee shall use U.S. EPA Method 201A or other method approved in writing by the Department. [s. NR 439.06(1m), Wis. Adm. Code] Compliance</p> <p>(3) The permittee shall retain on site, plans and specifications, or equivalent, of each boiler indicating fuel capabilities. ⁴ [s. NR 439.04(1)(d), Wis. Adm. Code] Compliance</p>

¹ PM₁₀ emission rates for the stacks S12 and S13 were included because at these rates the permittee complies with the National Ambient Air Quality Standards (NAAQS) for PM₁₀.

² These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

³ Because the maximum theoretical emissions while firing this fuel are less than the allowable limit of 0.15 pounds per million BTU heat input, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit.

⁴ These plans and specifications are sufficient because the boilers are designed to burn only natural gas.

A. B02/S12 Natural Gas Fired Boiler Rated at 12.6 mmBTU/hr. Constructed/ Last Modified 1990; and B03/S13 - Natural Gas Fired Boiler Rated at 14.5 mmBTU/hr. Constructed/Last Modified 1996. These boilers are subject to the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units.

2. Visible Emissions		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
(1) The permittee may not cause or allow emissions of a shade or density greater than 20% opacity. [s. NR 431.05, Wis. Adm. Code] Compliance	(1) The permittee shall fire only natural gas in each of these boilers. ⁵ [ss. 285.65(3) and 285.65(1)(a), Wis. Stats.] Compliance – The permittee only uses natural gas in these two natural gas boilers.	(1) <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] Compliance (2) The permittee shall retain on site, plans and specifications, or equivalent, -of each boiler indicating fuel capabilities. ⁶ [s. NR 439.04(1)(d), Wis. Adm. Code] Compliance

⁵ Natural gas is a clean burning fuel. It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing this fuel. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

⁶ These plans and specifications are sufficient because the boilers are designed to burn only natural gas.

B. P08/S08/S70 - 11 Blend Tanks. Constructed/Last Modified - after 1980

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) If emissions of volatile organic compounds ever exceed 15 pounds in any day from any of the blend tanks, the permittee shall control volatile organic compound emissions from that tank by at least 85%. [s. NR 424.03(2)(b), Wis. Adm. Code.] Compliance</p> <p>(2) The total combined VOC emissions from tanks TK209 and TK210 may not exceed 1,666 pounds per month, averaged over any 12 consecutive calendar months. [s. 285.63(1)(a), Wis. Stats. and 11-KLH-039-EXM] Compliance – The rolling average emissions had a maximum of 2.5 lbs./month emission since the beginning 2016.</p>	<p>(1) The permittee shall record the <u>daily</u> VOC emissions (lb/day) from <u>each</u> of the 11 blend tanks to ensure that emissions from each of these units do not exceed 15 pounds in any day ⁷. Compliance – The facility documents the daily VOC emission from the tanks after using the cryogenic condensation unit when VOC emissions are present. The cryogenic condenser is used to control VOC emissions to be below 15 pounds per day.</p> <p>(2) If volatile organic compound emissions from any blend tank ever exceeds 15 pounds in any day, the permittee shall, in lieu of the requirement in I.B.1.b.(1), vent that blend tank to the cryogenic condensation unit C70 whenever emissions are present. Compliance –The facility vents the blend tanks to the cryogenic condensation unit when VOC emissions are present.</p> <p>(3) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(4) The permittee shall operate, inspect and maintain the tanks including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the tanks and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.</p> <p>(5) The permittee shall compute the combined total 12 month average VOC emissions from the tanks TK 209 and TK210 over each 12 consecutive month period using the data recorded under I.B.1.c.(4). Compliance</p> <p>(6) Blend Tanks TK209 and TK210 shall each be vented to the cryogenic</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever emissions testing is required for volatile organic compound emissions, U.S. EPA Method 25A shall be used. Compliance</p> <p>(2) The compliance demonstration requirements in I.B.1.b.(1) shall also serve as recordkeeping requirements for these emission units. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p> <p>(3) If volatile organic compound emissions ever exceed 15 pounds in any day from any tank, the following records shall be kept in lieu of I.B.1.c.(2):</p> <p>(a) The permittee shall continuously record the temperature of the final stage of the cryogenic condenser.</p> <p>(b) The permittee shall keep the following records:</p> <p>(i) Identification of the individuals responsible for inspecting, maintaining, and repairing the air pollution control equipment and the tanks.</p> <p>(ii) The maximum intervals for inspection and routine maintenance of the tanks and the pollution control equipment.</p> <p>(iii) Description of the items or conditions that will be checked.</p> <p>(iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall keep the records of the total combined monthly VOC emissions from tanks TK209 and TK210. [s. NR 439.04(1)(d), Wis. Adm. Code] Compliance</p> <p>(5) The permittee shall maintain records of the combined total 12 month average VOC emissions from the tanks TK 209 and TK210 over each 12 consecutive month period using the data recorded under I.B.1.c.(4). Compliance</p>

⁷This requirement is necessary to show that the emission units are exempt from the requirements of s. NR 424.03(2)(b), Wis. Adm. Code. If daily throughputs are recorded to show compliance with this section, then daily emissions may be calculated and recorded after the end of the month.

B. P08/S08/S70 - 11 Blend Tanks. Constructed/Last Modified - after 1980

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	condensation unit C70 whenever VOC emissions are present. Compliance	

B. P08/S08/S70 - 11 Blend Tanks. Constructed/Last Modified - after 1980.

2. Acrylonitrile		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) Best Available Control Technology. The permittee shall control emissions of acrylonitrile to a level which is the best available control technology (BACT). BACT has been determined to be control using a cryogenic condensation system with an overall capture and control efficiency of 99%. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance – the cryogenic condenser is used to control capture efficiency.</p>	<p>(1) The permittee shall only manufacture nitriles, and adducts in tanks TK204 and TK205 and the reactors listed in I.D. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – Nitrile batches are only manufactured in TK204 and TK205.</p> <p>(2)The permittee shall only manufacture amphoteric in tanks TK204, TK205, TK209 and TK210. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – Amphoteric batches are only manufactured in TK204, TK205, TK209, and TK210.</p> <p>(3) Blend tanks TK 204, TK205, TK209, and TK210 shall each be vented to the cryogenic condensation unit C70 whenever acrylonitrile emissions are present. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – Amphoteric batches are only manufactured and vented to the cryogenic condensation unit.</p> <p>(4) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.08(1)(c)1.b., Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(5) The permittee shall operate, inspect and maintain the tanks including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance</p>	<p>(1) Reference Test Method for Acrylonitrile Emissions: Whenever emissions testing is required for acrylonitrile, U.S. EPA Method 0030 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall maintain records of the manufacture of nitriles, adducts and amphoteric as follows: (i) name of material manufactured, (ii) date of manufacture, and (iii) tank number where material is manufactured. Compliance</p> <p>(3) The permittee shall continuously monitor the temperature of the final stage of the cryogenic condenser. [s. NR 407.08(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall continuously record the temperature of the final stage of the cryogenic condenser. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(5) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing the air pollution control equipment and the tanks. (ii) The maximum intervals for inspection and routine maintenance of the tanks and the pollution control equipment. (iii) Description of the items or conditions that will be checked.</p>

2. Acrylonitrile		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	and operation of the tanks and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.	(iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance

B. P08/S08/S70 - 11 Blend Tanks. Constructed/Last Modified - after 1980.

3. Acetic Acid and Acrylic Acid and other hazardous air pollutants		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
(1) The permittee may not cause, allow or permit emissions of a hazardous air contaminant listed in ch. NR 445, Wis. Adm. Code, to be emitted in such quantity that exceed the value in Table A of s. NR 445.07, Wis. Adm. Code for the contaminant. [s NR 445.07(1), Wis. Adm. Code.] Compliance	(1) The compliance demonstration requirements of I.B.2.b.(1) - (5) shall be used as compliance demonstration requirements for I.B.3.a.(1). [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance	(1) <u>Reference Test Method for Hazardous Air Pollutant Emissions:</u> Whenever emissions testing is required for hazardous air pollutant emissions, plans approved by the Department in writing shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance (2) The compliance monitoring and recordkeeping requirements of I.B.2.c.(2) - (5) shall be used as compliance monitoring and recordkeeping requirements with the compliance demonstration requirements in I.B.3.b.(1). [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance

B. P08/S08/S70 - 11 Blend Tanks. Constructed/Last Modified - after 1980.

4. Ammonia		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The emissions of ammonia may not exceed the value in Table A of s. NR 445.07, Wis. Adm. Code for the contaminant. [s NR 445.07(1), Wis. Adm. Code] Compliance</p>	<p>(1) Blend tank containing greater than 1% by weight residual ammonia are loaded. [ss. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility vents emissions to the ammonia control unit when ammonia emissions are present.</p> <p>(2) The pH of the phosphoric acid solution in tank TK803 may not exceed 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility maintains the pH below 7.0.</p> <p>(3) The permittee shall change the solution of the tank TK803 when the pH of the phosphoric acid solution approaches 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility changes the solution when the pH approaches 7.0.</p> <p>(4) The permittee may not allow ammonia to pass through the phosphoric acid solution in tank TK803 if its pH is greater than 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. There was one instance when the pH exceeded 7.0 on 6/12/2016. The facility shutdown during this instance and only restarted when the pH was below 7.0.</p> <p>(5) The permittee shall maintain on site written procedures for ensuring that emissions from Process P31 are directed to the correct control system. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p>	<p>(1) The permittee meet the recordkeeping requirements as given under I.C.2.c. Compliance</p>

C. P09/S09 - Process Drumming Hood. Constructed/Last Modified – 2000; and P31/S31 - Tankwagon Loading. Constructed/Last Modified 2006.

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) If emissions of volatile organic compounds ever exceed 15 pounds in any day from any one of P09, or P31, the permittee shall control volatile organic compound emissions from that process by at least 85%. [s. NR 424.03(2)(b), Wis. Adm. Code.] Compliance</p>	<p>(1) The permittee shall record the <u>daily</u> organic compound emissions from each of the processes P09, and P31 to ensure that emissions from each of these units do not exceed 15 pounds in any day⁸. [s. 285.65(7), Wis. Stats.] Compliance – The facility documents the daily VOC emission from the tanks after using the cryogenic condensation unit when VOC emissions are present.</p> <p>(2) If volatile organic compound emissions from any one of processes P09, or P31 ever exceeds 15 pounds in any day, the permittee shall, in lieu of the records required in I.C.1.b.(1), control emissions by a condenser or catalytic oxidation. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance –The facility vents the blend tanks to the cryogenic condensation unit when VOC emissions are present.</p> <p>(3) If either control device listed in (2) above is required, the permittee shall: (a) maintain the setpoint temperature of the final stage of the cryogenic condenser at or below negative 80° C; (b) maintain the operating temperature of the catalytic incinerator of at least 545°F and the catalyst outlet temperature of not more than 1050°F. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range. The incinerator operates for short periods of time on most days. The incinerator is heated up to more than 545°F before the VOC emissions are vented to the incinerator. The facility has an interlocked system that VOC’s cannot be burned until the temperature is reached.</p> <p>(4) The permittee shall operate, inspect and maintain the emission sources (P09 and P31) including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the emission sources and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever emissions testing is required for volatile organic compound emissions, U.S. EPA Method 25A shall be used. [s. NR 439.06(3)(a), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall keep records showing the daily emissions of organic compounds from P09 and P31. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p> <p>(3) If volatile organic compound emissions ever exceed 15 pounds in any day from any one of units P09, or P31, the following records shall be kept in lieu of I.C.1.c.(2): (a) The permittee shall continuously monitor and record the parameters established in I.C.1.b.(3)(a) and/or (b). (b) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing the emission sources and air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the emission sources and air pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p>

⁸This requirement is necessary to show that the emission units are exempt from the requirements of s. NR 424.03(2)(a) and (b), Wis. Adm. Code. If daily thruputs are recorded to show compliance with this section, then daily emissions may be calculated and recorded after the end of the month.

C. P09/S09 - Process Drumming Hood. Constructed/Last Modified – 2000; and P31/S31 - Tankwagon Loading. Constructed/Last Modified – 2006.

2. Ammonia		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The emissions of ammonia may not exceed the value in Table A of s. NR 445.07, Wis. Adm. Code for the contaminant. [s NR 445.07(1), Wis. Adm. Code] Compliance</p>	<p>(1) Tankwagon Loading, process P31, shall be vented to the ammonia control system C80 whenever products containing more than 1% by weight residual ammonia are loaded. [ss. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility vents emissions to the ammonia control unit when ammonia emissions are present.</p> <p>(2) The pH of the phosphoric acid solution in tank TK803 may not exceed 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility maintains the pH below 7.0.</p> <p>(3) The permittee shall change the solution of the tank TK803 when the pH of the phosphoric acid solution approaches 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility changes the solution when the pH approaches 7.0.</p> <p>(4) The permittee may not allow ammonia to pass through the phosphoric acid solution in tank TK803 if its pH is greater than 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. There was one instance when the pH exceeded 7.0 on 6/12/2016. The facility shutdown during this instance and only restarted when the pH was below 7.0.</p> <p>(5) The permittee shall maintain on site written procedures for ensuring that emissions from Process P31 are directed to the correct control system. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Ammonia Emissions:</u> Whenever emissions testing is required for ammonia emissions, NIOSH Method 125 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall monitor the pH of the phosphoric acid solution in tank TK803 on an hourly basis. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall record the pH of the phosphoric acid solution in tank TK803 each hour. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall maintain records which includes the following: (a) The date that the phosphoric acid solution in tank TK 803 is changed; (b) The pH of the phosphoric acid solution prior to changing the tank; and (c) The pH of the phosphoric acid solution after changing the tank. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(5) The permittee shall make a copy of the written procedures required in I.C.2.b.(6) available to department personal upon request. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

C. P09/S09 - Process Drumming Hood. Constructed/Last Modified – 2000; and P31/S31 - Tankwagon Loading. Constructed/Last Modified – 2006

3. Methyl chloride		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The permittee shall limit methyl chloride emissions per I.ZZZ.1.a.(1)⁹. [s. 285.65(7), Wis. Stats.] Compliance</p>	<p>(1) The tankwagon loading process P31 shall be vented to the cryogenic condensation system C70 whenever products containing more than 1% by weight residual methyl chloride are loaded. [ss. NR 407.09(4)(a)3.b., and s. NR 445.07(1)(a), Wis. Adm. Code.] Compliance – The facility vents emissions to the cryogenic condenser unit when methyl chloride emissions are present.</p> <p>(2) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.09(1)(c)1.b., 445.05(3)(b), and 445.04(3)(b), Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(3) The permittee shall maintain on site written procedures for ensuring that emissions from Process P31 are directed to the correct control system. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall operate, inspect and maintain the emission sources (P09 and P31) including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the emission units and control equipment in a manner consistent with good air pollution control practice for minimizing emissions.[ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Hazardous Air Pollutant Emissions</u>: Whenever emissions testing is required for hazardous air pollutant emissions, plans approved by the Department in writing shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall continuously monitor the temperature of the final stage of the cryogenic condenser. [s. NR 407.08(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall continuously record the temperature of the final stage of the cryogenic condenser. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall make a copy of the written procedures required in I.C.3.b.(3) available to department personal upon request. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(5) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing the emission units and air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the emission units and the pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p> <p>(6) The permittee shall keep the records of the methyl chloride emission from processes P09 and P31. [s. NR 439.04(1)(d), Wis. Adm. Code] Compliance</p>

⁹This emission limitation was requested by the facility to ensure that potential emissions of methyl chloride are less than 10 TPY making the facility an area source of hazardous air pollutants.

D. S80 and S70, P01 - Amine Derivatives Reactor R-1 and ancillary equipment including D-6. Constructed/Last Modified – 1973;
P02 - Hydrogenation and Derivatives Reactor R-2 and ancillary equipment including D-123. Constructed/Last Modified - June 26, 1995;
P03 - Hydrogenation Reactor R-3 and ancillary equipment including TK 805. Constructed/Last Modified – 1978;
P04 - Intermediates and Amine Derivatives Reactor R-4. Constructed/Last Modified – 1978;
P13 - Hydrogenation Reactor R-5 and ancillary equipment including TK 805, D-5. Constructed/Last Modified - August 31, 1992;
P60 - Batch Chemical Reactor R-6 and ancillary equipment including D-6., Constructed/Last Modified – 2006;
P70 - Hydrogenation Reactor R-7 and ancillary equipment including TK 807, D-7 Constructed/Last Modified - June 26, 1997; and
P80-Hydrogenation Reactor R-8 and ancillary equipment including TK 808, D-8. Constructed/Last Modified-October, 2005.

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The permittee shall control emissions of photochemically reactive organic compounds¹⁰ emitted from P01, P03, and P04 by 85%. [s. NR 424.03(2)(a), Wis. Adm. Code.] Compliance</p> <p>(2) The permittee shall control emissions of volatile organic compounds emitted from P02, P13, P60, P70 and P80 by at least 85%. [s. NR 424.03(2)(b), Wis.] Compliance</p>	<p>(1) Except for P04, each chemical reactor listed above shall be vented to either the cryogenic condensation unit C70 or the ammonia control system C80 depending on the material produced. The control C70 is used whenever a product manufacturing emits photochemically reactive organic compound emissions/volatile organic compound emissions as a major component whereas control C80 is used whenever a product manufacturing emits ammonia as a major components.[s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance</p> <p>(2) The permittee may not hydrogenate ether nitriles or adducts or manufacture any other product which may emit ammonia in P04. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – P04 is only connected to the cryogenic condenser. P04 is not connected to the ammonia control unit and therefore ammonia emissions would not be controlled.</p> <p>(3) P04 shall be vented to the cryogenic condensation unit, C70, whenever photochemically reactive organic compound emissions are present. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance</p> <p>(4) With the exception of P04, the permittee shall equip all reactors listed above with a pressure switch or other device which automatically directs emissions to the proper control system. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – All reactors have an interlocked pressure switch. When Methyl Chloride is present emissions must be vented to the cryogenic condenser. When Ammonia is present emissions must be vented to the ammonia control unit.</p> <p>(5) The requirements in I.D.2.b.(2) and I.D.3.b.(3), (4), and (5), shall be used to demonstrate compliance with the limitations in I.D.1.a.(1) and (2). Compliance</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever emissions testing is required for volatile organic compound emissions, U.S. EPA Method 25A shall be used. [s. NR 439.06(3)(a), Wis. Adm. Code] Compliance</p> <p>(2) The requirements in I.D.2.c.(4) and (5) and I.D.3.c.(2)-(4) shall be used to monitor compliance with the limitations in I.D.1.a.(1) and (2). [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall keep a log of the reactions performed in P04 which includes the following: (a) The date of each batch (b) The type of batch manufactured. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

¹⁰ Section NR 419.02(14), Wis. Adm. Code, defines photochemically reactive organic compounds as follows: any of the following: (a) Group A: Hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones, which have olefinic or cyclo-olefinic type unsaturation. (b) Group B: Aromatic compounds with 8 or more carbon atoms to the molecule, except ethylbenzene. (c) Group C: Ethylbenzene, toluene, or ketones having branched hydrocarbon structures. (d) Group D: A solvent or mixture of organic compounds in which any of the following conditions are met: 1. More than 20% of the total volume is composed of any combination of compounds listed in Group A, B, or C above. 2. More than 5% of the total volume is composed of any combination of the compounds listed in group A above. 3. More than 8% of the total volume is composed of any combination of the compounds listed in group B above.

D. S70 and S80, P01, P02, P03, P04, P13, P60, P70, and P80 - Process Chemical Reactor Vessels.

2. Acrylonitrile, Ethylene Oxide, and Propylene Oxide		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) <u>Best Available Control Technology:</u> The permittee shall control emissions of acrylonitrile, ethylene oxide, and propylene oxide to a level which is the best available control technology (BACT). BACT has been determined to be control using a cryogenic condensation system with an overall capture and control efficiency of 99%. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance</p>	<p>(1) Each reactor listed above shall be vented to the cryogenic condensation unit C70 or other equivalent control device whenever emissions of acrylonitrile, ethylene oxide, or propylene oxide are present. [ss. NR 407.09(4)(a)3.b, and 445.07(1)(c), Wis. Adm. Code.] Compliance</p> <p>(2) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.09(1)(c)1.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(3) With the exception of P04, the permittee shall equip all reactors listed above with a pressure switch or other device which automatically directs emissions to the proper control system. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – All reactors have an interlocked pressure switch. When Methyl Chloride is present emissions must be vented to the cryogenic condenser. When Ammonia is present emissions must be vented to the ammonia control unit.</p> <p>(4) The permittee shall operate, inspect and maintain the reactors including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the reactors and control equipment in a manner consistent with good air pollution control practice for minimizing emissions.[ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Acrylonitrile Emissions:</u> Whenever emissions testing is required for acrylonitrile, U.S. EPA Method 0030 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) <u>Reference Test Method for Ethylene Oxide Emissions:</u> Whenever emissions testing is required for ethylene oxide, NIOSH Method 3702 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(3) <u>Reference Test Method for Propylene Oxide Emissions:</u> Whenever emissions testing is required for propylene oxide, methods and plans approved in writing by the department shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(4) The permittee shall continuously monitor the temperature of the final stage of the cryogenic condenser. [s. NR 407.08(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(5) The permittee shall continuously record the temperature of the final stage of the cryogenic condenser. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(6) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing the reactors and the air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the reactors and the air pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p>

D. S70 and S80, P01, P02, P03, P04, P13, P60, P70, and P80 - Process Chemical Reactor Vessels

3. Ammonia		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The ammonia emissions may not exceed the value in Table A of s. NR 445.07, Wis. Adm. Code for the contaminant. [s NR 445.07(1), Wis. Adm. Code] Compliance</p>	<p>(1) The permittee may not hydrogenate ether nitriles or adducts or manufacture any other product which may contain ammonia in P04. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance</p> <p>(2) With the exception of P04, all reactor vessels listed above shall be vented to the ammonia control system C80 or a comparable control device whenever emissions of ammonia are present. [ss. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility vents emissions to the ammonia control unit when ammonia emissions are present.</p> <p>(3) The pH of the phosphoric acid solution in tank TK 803 may not exceed 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility maintains the pH below 7.0.</p> <p>(4) The permittee shall change the solution of the tank TK803 when the pH of the phosphoric acid solution approaches 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility changes the solution when the pH approaches 7.0.</p> <p>(5) The permittee may not allow ammonia to pass through the phosphoric acid solution in tank TK803 if its pH is greater than 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. There was one instance when the pH exceeded 7.0 on 6/12/2016. The facility shutdown during this instance and only restarted when the pH was below 7.0.</p> <p>(6) Except P04, the permittee shall equip all reactors listed above with a pressure switch or other device which automatically directs emissions to the proper control system. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – All reactors have an interlocked pressure switch. When Methyl Chloride is present emissions must be vented to the cryogenic condenser. When Ammonia is present emissions must be vented to the ammonia control unit.</p>	<p>(1) <u>Reference Test Method for Ammonia Emissions:</u> Whenever emissions testing is required for ammonia emissions, NIOSH Method 125 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall monitor the pH of the phosphoric acid solution in tank TK803 on an hourly basis. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall record the pH of the phosphoric acid solution in tank TK803 each hour. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall maintain a log which includes the following: (a) The date that the phosphoric acid solution in tank TK 803 is changed; and (b) The pH of the phosphoric acid solution prior to changing the tank; and (c) The pH of the phosphoric acid solution after changing the tank. [s. NR 439.04(1)(d), Wis. Adm. Code] Compliance</p>

D. S70 and S80, P01, P02, P03, P04, P13, P60, P70, and P80 - Process Chemical Reactor Vessels, continued...

4. Methyl chloride, acrylic acid, and other hazardous air pollutants		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The permittee may not cause, allow or permit emissions of a hazardous air contaminant listed in ch NR 445, Wis. Adm. Code, to be emitted in such quantity that exceed the value in Table A of s. NR 445.07, Wis. Adm. Code for the contaminant. [s NR 445.07(1), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall limit methyl chloride emissions per I.ZZZ.1.a.(1) [s. 285.65(7), Wis. Stats.] Compliance</p>	<p>(1) All reactor vessels listed above shall be vented to the cryogenic condensation system C70 or a comparable control device whenever emissions of acrylic acid, acetaldehyde, and/or methyl chloride are present. [ss. NR 407.09(4)(a)3.b., and s. NR 445.07(1)(c), Wis. Adm. Code] Compliance</p> <p>(2) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.09(1)(c)1.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(3) With the exception of P04, the permittee shall equip all reactors listed above with a pressure switch or other device which automatically directs emissions to the proper control system. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – All reactors have an interlocked pressure switch. When Methyl Chloride is present emissions must be vented to the cryogenic condenser. When Ammonia is present emissions must be vented to the ammonia control unit.</p> <p>(4) The permittee shall operate, inspect and maintain the reactors including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the reactors and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices used are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Hazardous Air Pollutant Emissions:</u> Whenever emissions testing is required for hazardous air pollutant emissions, plans approved by the Department in writing shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The compliance monitoring and recordkeeping requirements of I.D.2.c.(4) and (5) shall be used to monitor compliance with the limitations I.D.4.a.(1) and (2). [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing the reactors and the air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the reactors and the pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall maintain records of emissions of methyl chloride from all sources covered under I.D. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

D. S70 and S80, P01, P02, P03, P04, P13, P60, P70, and P80 - Process Chemical Reactor Vessels, continued...

5. VOC and/or HAPs		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING
<p>(1) The permittee shall comply with applicable requirements of the Compliance Assurance Monitoring (CAM) Plan Rule for processes P04 (R-4), P13 (R-5), P60 (R-6), P70 (R-7), and P80 (R-8) per 40 CFR Part 64. [s. 285.65(13), Wis. Stats.; and 40 CFR Part 64] Compliance</p>	<p>(1) To demonstrate compliance with I.D.5.a.(1), the permittee shall comply with the requirements of CAM Plan as presented in Part III of the permit for processes P04 (R-4), P13 (R-5), P60 (R-6), P70 (R-7), and P80 (R-8) including, but not limited to, details of the monitoring pursuant to 40 CFR 64.3, responding to and reporting exceedances pursuant to 40 CFR 64.7 and 64.8, and reporting and recordkeeping requirements pursuant to 40 CFR 64.9. [s. 285.65(13), Wis. Stats., and s. NR 439.03(1)(b), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall update the CAM Plan every five years in conjunction with renewal of the operation permit. [s. 285.65(3), Wis. Stats.] Compliance – The plan was submitted to the Department in March of 2017. The facility should place a date on the plan and update the plan every five years.</p>	<p>(1) The permittee shall keep a copy of the CAM plan for processes P04 (R-4), P13 (R-5), P60 (R-6), P70 (R-7), and P80 (R-8) at the plant and make the plan available to the Department personnel upon request. [s. 285.65(3), Wis. Stats.] Compliance</p>

E. T03 - Propylene Oxide Storage Tank. Constructed/Last Modified –2001

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) Emissions from this storage tank shall be controlled as follows¹²:</p> <p>(a) for emissions due to tank standing, or breathing, the cryogenic condensation unit shall be used;</p> <p>(b) for emissions due to material transfers, the cryogenic condensation system shall be used. [s. NR 419.06(2), Wis. Adm. Code, and s. 285,65(7), Wis. Stats.]</p> <p>Compliance</p>	<p>(1) All emissions from this storage tank shall be vented to the cryogenic condensation unit C70. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance</p> <p>(2) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.09(1)(c)1.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever emissions testing is required for volatile organic compound emissions, U.S. EPA Method 25A shall be used. [s. NR 439.06(3)(a), Wis. Adm. Code] Compliance</p> <p>(2) The requirements in I.E.2.c.(2) and (3) shall also be used to monitor compliance with the limitations in I.E.1.a.(1). [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall keep on site the “as built” plans for the cryogenic condensation unit which show how it is connected with the storage tank. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

¹² Use of these control techniques also help ensure that the facility will be a synthetic minor non-part 70 source of VOCs.

E. T03 - Propylene Oxide Storage Tank. Constructed/Last Modified –2001

2. Propylene Oxide		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) <u>Best Available Control Technology</u>: The permittee shall control emissions of propylene oxide to a level which is the best available control technology (BACT.) BACT has been determined to be control of breathing or standing and working losses using a cryogenic condensation system with an overall capture and control efficiency of 99%. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance</p>	<p>(1) All emissions due to breathing, standing, and working from this storage tank shall be vented to the cryogenic condensation unit C70. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code] Compliance</p> <p>(2) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.09(1)(c)1.b., and 445.07(1)(c), Wis. Adm. Code] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(3) Only propylene oxide shall be stored in this storage tank. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – Only propylene oxide is stored in this tank.</p> <p>(4) The permittee shall operate, inspect and maintain the tank including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the tanks and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices used are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Propylene Oxide Emissions</u>: Whenever emissions testing is required for propylene oxide, methods and plans approved in writing by the department shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall continuously monitor the temperature of the final stage of the cryogenic condenser. [s. NR 407.08(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall continuously record the temperature of the final stage of the cryogenic condenser. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall record or retain written delivery information from the vender showing what substance is delivered to this storage tank. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(5) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing of the tank and the air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the tank and the pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p>

F. T06 - Acrylonitrile Storage Tank. Constructed/Last Modified - 1994

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) Emissions from this storage tank shall be controlled as follows¹³:</p> <p>(a) for emissions due to tank standing or breathing, the cryogenic condensation unit shall be used; and</p> <p>(b) for emissions due to material transfers, a closed loop vapor return system shall be used. [s. NR 419.06(2), Wis. Adm. Code, and s. 285,65(7), Wis. Stats.]</p> <p>Compliance</p>	<p>(1) All emissions due to breathing and standing from this storage tank shall be vented to the cryogenic condensation unit C70. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.]</p> <p>Compliance</p> <p>(2) Whenever this storage tank is being filled a closed loop vapor return system shall be used. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance</p> <p>(3) In the event that chemicals are pumped to this tank too quickly for the pressure to balance using the closed loop vapor return system, excess vapors shall be vented to the cryogenic condensation system, C70. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.]</p> <p>Compliance</p> <p>(4) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.09(1)(c)1.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever emissions testing is required for volatile organic compound emissions, U.S. EPA Method 25A shall be used. [s. NR 439.06(3)(a), Wis. Adm. Code] Compliance</p> <p>(2) The compliance monitoring and recordkeeping requirements in I.F.2.c.(2) and (3) shall also be used to monitor compliance with compliance demonstration requirements in this row. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall keep on site:</p> <p>(a) the “as built” plans for the closed loop vapor return system; and</p> <p>(b) the “as built” plans for the cryogenic condensation unit. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

¹³ Use of these control techniques also help ensure that the facility will be an area source part 70 source of VOCs.

F. T06 - Acrylonitrile Storage Tank. Constructed/Last Modified - 1994

2. Acrylonitrile		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) Best Available Control Technology: The permittee shall control emissions of acrylonitrile to a level which is the best available control technology (BACT.) BACT has been determined to be as follows:</p> <p>(a) Control of breathing or standing losses using a cryogenic condensation system with an overall capture and control efficiency of 99%.</p> <p>(b) Control of working losses using a closed loop vapor return system. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance</p>	<p>(1) All emissions due to breathing and standing from this storage tank shall be vented to the cryogenic condensation unit C70. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance</p> <p>(2) Whenever this storage tank is being filled a closed loop vapor return system shall be used. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance</p> <p>(3) In the event that chemicals are pumped to this tank too quickly for the pressure to balance using the closed loop vapor return system, excess vapors shall be vented to the cryogenic condensation system, C70. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance</p> <p>(4) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80° C. [s. NR 407.09(1)(c)1.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the -80° C limit. The facility corrects instances when the condenser is above -80° C within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(5) Only acrylonitrile shall be stored in this storage tank. [s. NR 407.09(4)a)3.b., Wis. Adm. Code.] Compliance – This tank is used to only store acrylonitrile.</p> <p>(6) The permittee shall operate, inspect and maintain the tanks including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the tanks and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices used are designed to minimize the air emissions.</p>	<p>(1) Reference Test Method for Acrylonitrile Emissions: Whenever emissions testing is required for acrylonitrile, U.S. EPA Method 0030 shall be used. [s. NR 439.06(8), Wis. Adm. Code.] Compliance</p> <p>(2) The permittee shall continuously monitor the temperature of the final stage of the cryogenic condenser. [s. NR 407.08(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall continuously record the temperature of the final stage of the cryogenic condenser. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall record or retain written delivery information from the vender showing what substance is delivered to this storage tank. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(5)The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing the tank and the air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the tank and the pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p>

G. TK800 – Anhydrous Ammonia Storage Tank – Constructed 2014; TK 315 -Aqueous Ammonia Storage-Constructed 1994; and TK316 -Aqueous Ammonia Storage-Constructed 1992.

1. Ammonia		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The emissions of ammonia may not exceed the value in Table A of s. NR 445.07, Wis. Adm. Code for the contaminant. [s NR 445.07(1), Wis. Adm. Code] Compliance</p>	<p>(1) The storage tanks shall be vented to the ammonia control system C80 or a comparable control device whenever emissions of ammonia are present. [ss. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility vents emissions to the ammonia control unit when ammonia emissions are present.</p> <p>(2) The pH of the phosphoric acid solution in tank TK 803 may not exceed 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility maintains the pH below 7.0.</p> <p>(3) The permittee shall change the solution of the tank TK803 when the pH of the phosphoric acid solution approaches 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility changes the solution when the pH approaches 7.0.</p> <p>(4) The permittee may not allow ammonia to pass through the phosphoric acid solution in tank TK803 if its pH is greater than 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. There was one instance when the pH exceeded 7.0 on 6/12/2016. The facility shutdown during this instance and only restarted when the pH was below 7.0.</p>	<p>(1) <u>Reference Test Method for Ammonia Emissions:</u> Whenever emissions testing is required for ammonia emissions, NIOSH Method 125 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall monitor the pH of the phosphoric acid solution in tank TK803 on an hourly basis. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall record the pH of the phosphoric acid solution in tank TK803 each hour. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall maintain a log which includes the following: (a) The date that the phosphoric acid solution in tank TK 803 is changed; and (b) The pH of the phosphoric acid solution prior to changing the tank; and (c) The pH of the phosphoric acid solution after changing the tank. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

H. T11 - Ethylene Oxide Storage Tank. Constructed – 1998; and T112 - Ethylene Oxide Intermediate Storage Transfer Tanks. Constructed - 1998 .

1. Ethylene Oxide		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) <u>Best Available Control Technology (BACT)</u>: To meet BACT when unloading railcars, the permittee shall:</p> <p>(a) use pumps equipped with glycol cooled double mechanical seals; and</p> <p>(b) use a closed loop vapor return system. [s. NR 445.07(1)(c), Wis. Adm. Code] Compliance</p>	<p>(1) The storage temperature of each tank shall be maintained below 120°F at all times. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – Of the records reviewed, all temperature records were below 120°F for tank T112.</p> <p>(2) The pressure within each tank shall be maintained at or below 90 pounds per square inch gage pressure (psig). [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance – Of the records reviewed, all gage pressure records were below 90 PSI for tank T112.</p> <p>(3) The permittee shall maintain the pressure relief valve in accordance with the requirements of sec. I.K. (Leak Detection and Repair (LDAR)) of this permit. [s. NR 407.09(1)1.b., Wis. Adm. Code, and 10-SML-017-EXM] Compliance – The permittee has an LDAR evaluation each month. All valve leaks are corrected quickly.</p> <p>(4) Ethylene oxide transfer hoses shall be equipped with dry break fittings or other equivalent valve or fitting. Prior to disconnecting hoses residual pressure should be vented through the acid scrubber. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The permittee has equivalent valves on the transfer hoses. The valves used are designed to prevent Ethylene oxide from leaking.</p> <p>(5) The permittee shall operate, inspect and maintain the tanks including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the tanks and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Ethylene Oxide Emissions</u>: Whenever emissions testing is required for ethylene oxide emissions, NIOSH Method 3702 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The storage temperature within each tank shall be continuously monitored. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The storage temperature within each tank shall be continuously recorded. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The storage pressure within each tank shall be continuously monitored. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(5) The storage pressure within each tank shall be continuously recorded. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(6) The permittee shall keep on site, the plans and specifications on the pumps specifying the types of seals. [s. NR 439.0491)(d), Wis. Adm. Code.] Compliance</p> <p>(7) The permittee shall keep on site, the plans and specifications on the dry break fittings or other equivalent valve or fitting. [s. NR 439.0491)(d), Wis. Adm. Code.] Compliance</p> <p>(8) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing the tanks and the air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the tanks and the pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p>

I. T30 - Series of 32 Swing Tanks; Constructed/Last Modified – 1997; and Series of 7 Isotcontainers Constructed/Last Modified - 2006.

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) For material transfers to these storage tanks, each tank shall use a permanent submerged fill pipe. [s. 419.06(2), Wis. Adm. Code.] Compliance</p>	<p>(1) The requirements of I.I.1.c.(2) shall also serve as compliance demonstration requirements for the limitation in I.I.1.a.(1). [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever emissions testing is required for volatile organic compound emissions, U.S. EPA Method 25A shall be used. [s. NR 439.06(3)(a), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall keep blue prints or other documents which show that each tank is fitted with a permanent submerged fill pipe. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p>

2. Ammonia		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The emissions of ammonia may not exceed the value in Table A of s. NR 445.07, Wis. Adm. Code for the contaminant. [s NR 445.07(1), Wis. Adm. Code] Compliance</p>	<p>(1) All storage tanks containing greater than 1% ammonia shall be vented to the ammonia control system C80 whenever emissions of ammonia are present. [ss. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility vents emissions to the ammonia control unit when ammonia emissions are present.</p> <p>(2) The pH of the phosphoric acid solution in tank TK 803 may not exceed 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility maintains the pH below 7.0.</p> <p>(3) The permittee shall change the solution of the tank TK803 when the pH of the phosphoric acid solution approaches 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. The facility changes the solution when the pH approaches 7.0.</p> <p>(4) The permittee may not allow ammonia to pass through the phosphoric acid solution in tank TK803 if its pH is greater than 7.0. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code.] Compliance – The facility continuously monitors pH in tank TK803. There was one instance when the pH exceeded 7.0 on 6/12/2016. The facility shutdown during this instance and only restarted when the pH was below 7.0.</p>	<p>(1) <u>Reference Test Method for Ammonia Emissions</u>: Whenever emissions testing is required for ammonia emissions, NIOSH Method 125 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall monitor the pH of the phosphoric acid solution in tank TK803 on an hourly basis. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall record the pH of the phosphoric acid solution in tank TK803 each hour. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall maintain a log which includes the following: (a) The date that the phosphoric acid solution in tank TK 803 is changed; (b) The pH of the phosphoric acid solution prior to changing the tank; and (c) The pH of the phosphoric acid solution after changing the tank. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(5) The permittee shall maintain the records of ammonia content of the product(s) stored in the storage tanks. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

J. T92 - Hazardous Waste Storage Tank. Constructed/last Modified - 1994.

1. Volatile Organic Compounds		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) Emissions from this storage tank shall be controlled as follows¹⁴: for emissions due to tank standing or breathing and for emissions due to material transfers, the cryogenic condensation unit shall be used. [s. NR 419.06(2), Wis. Adm. Code, and s. 285,65(7), Wis. Stats.] Compliance</p>	<p>(1) The compliance demonstration methods of I.J.2.b.(1) through (3) shall be used to ensure compliance with the limitation in I.J.1.a.(1). [s. NR 407.09(4)(a)3.b., Wis. Adm. Code, and s. 285.65(7), Wis. Stats.] Compliance – Based on I.J.2.b(1) through (3).</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever emissions testing is required for volatile organic compound emissions, U.S. EPA Method 25A shall be used. [s. NR 439.06(3)(a), Wis. Adm. Code] Compliance</p> <p>(2) The recordkeeping requirements in I.J.2.c.(2), (3) and (4) shall also serve to monitor compliance with the requirements in I.J.1.a.(1). [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall keep on site, the “as built” plans for the cryogenic condensation unit showing how it is connected to this storage tank. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

¹⁴ Use of these control techniques also help ensure that the facility will be an area source of VOCs.

J. T92 - Hazardous Waste Storage Tank. Constructed/last Modified – 1994.

2. Acrylonitrile		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) <u>Best Available Control Technology</u>: The permittee shall control emissions of acrylonitrile to a level which is the best available control technology (BACT.). BACT has been determined to be control of breathing or standing losses and working losses using a cryogenic condensation system with an overall capture and control efficiency of 99%. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance</p>	<p>(1) All emissions due to breathing, standing, and working from this storage tank shall be vented to the cryogenic condensation unit C70. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code] Compliance – The facility vents the storage tanks to the cryogenic condensation unit when VOC emissions are present.</p> <p>(2) The temperature of the final stage of the cryogenic condenser shall be maintained with a setpoint at or below negative 80°C. [ss. NR 407.09(4)(a)3.b., and 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility maintains the cryogenic condenser below the 80°C limit. The facility corrects such instances within a short time and cuts off the flow when the temperature is outside the range.</p> <p>(3) The permittee shall operate, inspect and maintain the tank including control equipment in accordance with the manufactures’ emission-related operation and maintenance instructions or develop and follow facility’s maintenance and inspection plan which must provide to the extent practicable for the maintenance and operation of the tanks and control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [ss. 285.65(3) and (4), Wis. Stats.] Compliance – The permittee operates, inspects, and maintains the tanks to manufacturers specifications. The practices in SAP are designed to minimize the air emissions.</p>	<p>(1) <u>Reference Test Method for Acrylonitrile Emissions</u>: Whenever emissions testing is required for acrylonitrile, U.S. EPA Method 0030 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall continuously monitor the temperature of the final stage of the cryogenic condenser. [s. NR 407.08(1)(c)1.b., Wis. Adm. Code.] Compliance</p> <p>(3) The permittee shall continuously record the temperature of the final stage of the cryogenic condenser. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(4) The permittee shall keep the following records: (i) Identification of the individuals responsible for inspecting, maintaining, and repairing of the tank and the air pollution control equipment. (ii) The maximum intervals for inspection and routine maintenance of the tank and the pollution control equipment. (iii) Description of the items or conditions that will be checked. (iv) Dates of inspection and maintenance completed. [s. NR 439.04(3), Wis. Adm. Code.] Compliance</p>

K. P99 - Fugitive Emissions from Piping, Pumps, Valves, etc.

1. Acrylonitrile, Ethylene Oxide, Propylene Oxide, and Methyl Chloride

a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) Best Available Control Technology. The permittee shall control emissions of acrylonitrile, ethylene oxide, methyl chloride, and propylene oxide, to a level which is the best available control technology (BACT.). BACT has been determined to be control of fugitive emissions from all interconnecting equipment at the facility by testing for leaks using the standards and requirements of s. NR 440.62(3) through (7), Wis. Adm. Code. with a leak rate of 500 ppm. [s. NR 445.07(1)(c), Wis. Adm. Code.]</p>	<p>(1) Equipment that is in vacuum service is excluded from the requirements of (3) to (10) if it is identified as required in I.K.1.c.(13)(e). [s. NR 445.07(1)(c), Wis. Adm. Code.] Not Applicable – There is no vacuum service.</p> <p>(2)(a) Whenever a leak is detected it shall be repaired as soon as practicable but not later than 15 calendar days after it is detected, except as provided in (9) below.</p> <p>(b) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance – Of the records reviewed, all leaks were corrected. Most leaks were corrected the day a leak was discovered. However, some leaks needed parts to complete the maintenance. Those leaks were corrected in a timely manner.</p> <p>(3) Pumps in light liquid service. (a) Each pump in light liquid service shall be:</p> <p>(i) monitored monthly to detect leaks; and</p> <p>(ii) checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.³</p> <p>(b) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of (a), provided the following requirements are met:</p> <p>(i) Each dual mechanical seal system is:</p> <p>(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or</p> <p>(B) Equipment with a barrier fluid degassing reservoir that is connected by a closed vent system to a control device that complies with the requirements of (10) below; or</p> <p>(C) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.</p> <p>(ii) The barrier fluid system is in heavy liquid service or is not in VOC service.</p>	<p>(1) Reference Test Method for Acrylonitrile Emissions: Whenever emissions testing is required for acrylonitrile, U.S. EPA Method 0030 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(2) Reference Test Method for Ethylene Oxide Emissions: Whenever emissions testing is required for ethylene oxide emissions, NIOSH Method 3702 shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(3) Reference Test Method for Propylene Oxide Emissions: Whenever emissions testing is required for propylene oxide, methods and plans approved in writing by the department shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>(4) Reference Test Method for Methyl Chloride Emissions: Whenever emissions testing is required for methyl chloride, methods and plans approved in writing by the department shall be used. [s. NR 439.06(8), Wis. Adm. Code] Compliance</p> <p>TEST METHODS AND PROCEDURES.</p> <p>(4) The permittee shall determine compliance with the standards in I.K.1.b.(3) through (12) as follows:</p> <p>(a) U.S. EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:</p> <p>(i) Zero air (less than 10 ppm of hydrocarbon in air); and</p> <p>(ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [s. NR 439.06(8), Wis. Adm. Code.] Compliance</p> <p>(5) The permittee shall determine compliance with the no detectable emission standards in I.K.1.b.(3)(c), (4)(g), (5), (8)(e) and (10)(f) as</p>

³If an instrument reading of 500 ppm or greater is measured a leak is detected. If there are indications of liquids dripping from the pump seal a leak is detected.

K. P99 - Fugitive Emissions from Piping, Pumps, Valves, etc.

1. Acrylonitrile, Ethylene Oxide, Propylene Oxide, and Methyl Chloride

a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	<p>(iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.</p> <p>(iv) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seals.</p> <p>(v)(A) Each sensor as described in (iii) is checked daily or is equipped with an audible alarm, and</p> <p>(B) The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.⁴</p> <p>(c) Any pump that is designated as described in I.K.1.c.(13)(a) and (b) for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of (a) and (b) above if the pump:</p> <p>(i) Has no externally actuated shaft penetrating the pump housing,</p> <p>(ii) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above ground as measured by the methods specified in I.K.1.c.(5), and</p> <p>(iii) Is tested for compliance with I.K.1.c.(7)(b), annually and at other times requested by the department.</p> <p>(d) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of (10) below it is exempt from the requirements of (a) through (c). [s. NR 445.07(1)(c), Wis. Adm. Code.]</p> <p>Compliance –The facility checks for leaks on a monthly basis and performs a weekly visual inspection. The vents and pumps are equipped to meet the specifications of the permit</p> <p>(4) <i>Compressors.</i> (a) Each compressor shall be equipped with a seal system that includes a barrier fluid system that prevents leakage of VOC to the atmosphere, except as provided in (13) and (f) and (g) below.</p> <p>(b) Each compressor seal system as required in (a) shall be</p> <p>(i) Operated with a barrier fluid at a pressure that is greater than the</p>	<p>follows:</p> <p>(a) The requirements of (4) above shall apply.</p> <p>(b) U.S. EPA Method 21 shall be used to determine the background. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. [s. NR 439.06(8), Wis. Adm. Code.] Compliance</p> <p>(6) The Permittee shall test each piece of equipment unless he or she demonstrates that a process unit is not in VOC series, that is, that the VOC content would never be reasonably expected to exceed 10% by weight. For purposes of this demonstration, the following methods and procedures shall be used:</p> <p>(a) Procedures that conform to the general methods in ASTM E168–67, E169– 63 or E260–73, incorporated by reference in s. NR 440.17, shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.</p> <p>(b) Organic compounds that are considered by the department to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.</p> <p>(c) Engineering judgment may be used to estimate the VOC content, if a piece of equipment has not been shown previously to be in service. If the department disagrees with the judgment, (a) and (b) above shall be used to resolve the disagreement. [s. NR 439.06(8), Wis. Adm. Code.]</p> <p>Compliance</p> <p>(7) The permittee shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:</p> <p>(a) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20°C. Standard reference texts or ASTM D2879–83, incorporated by reference in s. NR 440.17, shall be used to</p>

⁴If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in (e) a leak is detected.

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	<p>compressor stuffing box pressure; or</p> <p>(ii) Equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of (10) below; or</p> <p>(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.</p> <p>(c) The barrier fluid system shall be in heavy liquid service or may not be in VOC service.</p> <p>(d) Each barrier fluid system as described in (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.</p> <p>(e)(i) Each sensor as required in (d) shall be checked daily or shall be equipped with an audible alarm.</p> <p>(ii) The permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.⁵</p> <p>(f) A compressor is exempt from the requirements of (a) and (b) if it is equipped with a closed vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of (10) below, except as provided in (g).</p> <p>(g) Any compressor that is designated as described in I.K.1.c.(13)(a) and (b) for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of (a) through (f) if the compressor:</p> <p>(i) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in I.K.1.c.(5); and</p> <p>(ii) If a leak is detected the valve shall be monitored monthly until a leak is not detected for 2 successive months.</p> <p>(d) First attempts at repair include, but are not limited to, the following best practices where practicable:</p> <p>(i) Tightening of bonnet bolts;</p> <p>(ii) Replacement of bonnet bolts;</p> <p>(iii) Tightening of packing gland nuts;</p>	<p>determine the vapor pressures.</p> <p>(b) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20% by weight.</p> <p>(c) The fluid is a liquid at operating conditions. [s. NR 439.06(8), Wis. Adm. Code.] Compliance</p> <p>(8) Samples used in conjunction with (6), (7) and (9) shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.[s. NR 439.06(8), Wis. Adm. Code.] Compliance</p> <p>(9) The permittee shall determine compliance with the standards for flares as follows:</p> <p>(a) U.S. EPA Methods 22 shall be used to determine visible emissions.</p> <p>(b) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.</p> <p>(c) The maximum permitted velocity (V_{max}) for air–assisted flares shall be computed using the following equation: V_{max} = 8.706 + 0.7084 HT where:</p> <p>V_{max} is the maximum permitted velocity, m/sec HT is the net heating value of the gas being</p> <p>(d) The net heating value (HT) of the gas being combusted in a flare shall be computed as follows:</p> $HT = K \sum_{i=1}^n C_i H_i$ <p>where :</p> <p>K is the conversion constant, 1.740x10⁻⁷ (1/ppm)(g-mol/scm)(MJ/kcal)</p> <p>C_i is the concentration of sample component “i”, ppm H_i is the net heat of combustion of sample component “i” at 25°C and 760 mm Hg, kcal/g–mole</p> <p>(e) U.S. EPA Method 18 and ASTM D2504–67, incorporated by</p>

⁵If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under (6)(e)(ii) a leak is detected.

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a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	<p>(iv) Injection of lubricant into lubricated packing.</p> <p>(e) Any valve that is designated as described in I.K.1.c.(13)(b) for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of (a) if the valve:</p> <p>(i) Has no external actuating mechanism in contact with the process fluid;</p> <p>(ii) Is operated with emission less than 500 ppm above back-ground as determined by the method specified in I.K.1.c.(5), and</p> <p>(iii) Is tested for compliance with (e)(ii), annually, and at other times requested by the department.</p> <p>(f) Any valve that is designated as described in I.K.1.c.(14)(b) as a difficult-to-monitor valve is exempt from the requirements of (a) if:</p> <p>(i) The permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with (a), and</p> <p>(ii) The permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.</p> <p>(g) Any valve that is designated as described in I.K.1.c.(14)(f) as a difficult-to-monitor valve, is exempt from the requirements of (a) if:</p> <p>(i) The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.</p> <p>(ii) Is tested for compliance with (g)(i) initially upon designation, annually and at other times requested by the department. [s. NR 445.07(1)(c), Wis. Adm. Code.] Not Applicable – There are no compressors at the facility.</p> <p>(5) <i>Pressure relief devices in gas/vapor service.</i> (a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above back-ground, as determined by the methods specified in I.K.1.c.(5).</p> <p>(b)(i) After each pressure release the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable but no later than 5 calendar days after the pressure release, as provided in (9) below.</p>	<p>reference in s. NR 440.17, shall be used to determine the concentration of sample component “i” .</p> <p>(f) ASTM D2382–76, incorporated by reference in s. NR 440.17, shall be used to determine the net heat of combustion of component “i” if published values are not available or cannot be calculated.</p> <p>(g) U.S. EPA Method 2, 2A, 2C or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used. Compliance</p> <p>RECORDKEEPING REQUIREMENTS.</p> <p>(10) When each leak is detected as specified in I.K.1.b.(3), (4), (8), and (12), the following requirements apply:</p> <p>(a) A weather proof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.</p> <p>(b) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in I.K.1.b.(8)(c) and no leak has been detected during those 2 months.</p> <p>(c) The identification on equipment except on valves may be removed after it has been repaired. [s. NR 439.04(1)(d). Wis. Adm. Code.] Compliance</p> <p>(11) When each leak is detected as specified in I.K.1.b.(3), (4), (8) and (12) the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:</p> <p>(a) The instrument and operator identification numbers and the equipment identification number.</p> <p>(b) The date the leak was detected and the dates each attempt to repair the leak.</p> <p>(c) Repair methods applied in each attempt to repair the leak.</p> <p>(d) “Above 500 ppm if the maximum instrument reading measured by the methods specified in this permit, after each repair attempt is equal to or greater than 500 ppm. Compliance</p> <p>(e) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.</p> <p>(f) The signature of the permittee (or designate) whose decision it was that</p>

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	<p>(ii) No later than 5 calendar days after the pressure release the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in I.K.1.c.(5).</p> <p>(c) Any pressure relief device that is equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in (10) below is exempted from the requirements of this paragraph. [s. NR 445.07(1)(c), Wis. Adm. Code.]</p> <p>Compliance – The facility maintains the valves to have less than 500 ppm of emissions. All corrections take place in a timely manner. The facility has a closed vent system for pressure relief devices.</p> <p>(6) <i>Sampling connection systems.</i> (a) Each sampling connection system shall be equipped with a closed purge system or closed vent system, except as provided in (13) below.</p> <p>(b) Each closed purge system or closed system as required in (a) shall:</p> <p>(i) Return the purged process fluid directly to the process line with zero VOC emissions to the atmosphere; or</p> <p>(ii) Collect and recycle the purged process fluid with zero VOC emissions to the atmosphere; or</p> <p>(iii) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of (10) below.</p> <p>(c) In situ–sampling systems are exempt from (a) and (b). [s. NR 445.07(1)(c), Wis. Adm. Code.] Not Applicable – There are no sampling connection systems at the facility</p> <p>(7) <i>Open–ended valves or lines.</i> (a)(i) Each open–ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in (13) below.</p> <p>(ii) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open–ended valve or line.</p> <p>(b) Each open–ended valve or line equipped with a second valve shall be operated with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.</p> <p>(c) When a double block–and–bleed system is being used the bleed valve</p>	<p>repair could not be affected without a process shutdown.</p> <p>(g) The expected date of successful repair of the leak if a leak is not repaired within 15 days.</p> <p>(h) Dates of process unit shutdown that occur while the equipment is unrepaired.</p> <p>(i) The date of successful repair of the leak. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(12) The following information pertaining to the design requirements for closed vent systems and control devices described in I.K.1.b.(10) shall be recorded and kept in a readily accessible location:</p> <p>(a) Detailed schematics, design specifications, and piping and instrumentation diagrams.</p> <p>(b) The dates and descriptions of any changes in the design specifications.</p> <p>(c) A description of the parameter or parameters monitored as required in I.K.1.b.(1)(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter(s) was selected for the monitoring.</p> <p>(d) Periods when the closed vent systems and control devices required in I.K.1.b.(3) through (6) are not operated as designed, including periods when a flare pilot light does not have a flame.</p> <p>(e) Dates of startups and shutdowns of the closed vent systems and control devices required in I.K.1.b.(3) through (6). [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(13) The following information pertaining to all equipment subject to the requirements in I.K.1.b.(3) through (10) shall be recorded in a log that is kept in a readily accessible location:</p> <p>(a) A list of identification numbers for equipment subject to the requirements of this section.</p> <p>(b)(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of I.K.1.b.(3)(c), (4)(g), and (8)(e).</p> <p>(ii) The designation of equipment as subject to the requirements of I.K.1.b.(3)(c), (4)(g) and (8)(e), shall be signed by the permittee.</p> <p>(c) A list of equipment identification numbers for pressure relief devices required to comply with I.K.1.b.(5).</p>

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	<p>or line may remain open during operations that require venting the line between the block valves but shall comply with (a) at all times. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility has caps at the end of each open-ended valve. The valve makes the system enclosed at all times. All emissions are vented to the cryogenic condenser.</p> <p>(8) Valves in gas/vapor service in light liquid service. (a) Each valve shall be monitored monthly to detect leaks by the methods specified in I.J.1.c.(4) and shall comply with (b) through (d) except as provided in (e), (f), and (g) of this section, (11), (12) and (13) below.</p> <p>(b) In an instrument reading of 500 ppm or greater is measured a leak is detected.</p> <p>(c)(i) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.</p> <p>(ii) If a leak is detected the valve shall be monitored monthly until a leak is not detected for 2 successive months.</p> <p>(d) First attempts at repair include, but are not limited to, the following best practices where practicable:</p> <ul style="list-style-type: none"> (i) Tightening of bonnet bolts; (ii) Replacement of bonnet bolts; (iii) Tightening of packing gland nuts; (iv) Injection of lubricant into lubricated packing. <p>(e) Any valve that is designated as described in I.K.1.c.(13)(b) for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of (a) if the valve:</p> <ul style="list-style-type: none"> (i) Has no external actuating mechanism in contact with the process fluid; (ii) Is operated with emission less than 500 ppm above back-ground as determined by the method specified in I.K.1.c.(5), and (iii) Is tested for compliance with (e)(ii), annually, and at other times requested by the department. <p>(f) Any valve that is designated as described in I.K.1.c.(14)(b) as a difficult-to-monitor valve is exempt from the requirements of (a) if:</p> <ul style="list-style-type: none"> (i) The permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a 	<p>(d)(i) The dates of each compliance test as required in I.K.1.b.(3)(c), (4)(g), (5), and (8)(e).</p> <p>(ii) The background level measured during each compliance test.</p> <p>(iii) The maximum instrument reading measured at the equipment during each compliance test.</p> <p>(e) A list of identification numbers for equipment in vacuum service. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(14) The following information pertaining to all valves subject to the requirements of I.K.1.b.(8)(f) and (g), shall be recorded in a log that is kept in a readily accessible location:</p> <ul style="list-style-type: none"> (a) A list of identification numbers for valves that are designated as unsafe-to-monitor, an explanation for each valve stating why the valve is unsafe-to-monitor and the plan for monitoring each valve. (b) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor and the schedule for monitoring each valve. [s. NR 439.04(1)(d), Wis. Adm. Code] Compliance <p>(15) The following information shall be recorded for valves complying with I.K.1.b.(12).</p> <ul style="list-style-type: none"> (a) A schedule of monitoring. (b) The percent of valves found leaking during each monitoring period. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance <p>(16) The following information shall be recorded in a log that is kept in a readily accessible location:</p> <ul style="list-style-type: none"> (a) Design criterion required in I.K.1.b.(3)(b)(v) and (4)(e)(ii), and explanation of the design criterion; and (b) Any changes to this criterion and the reasons for the changes. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance

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	<p>consequence of complying with (a), and</p> <p>(ii) The permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.</p> <p>(g) Any valve that is designated as described in I.K.1.c.(14)(f) as a difficult-to-monitor valve, is exempt from the requirements of (a) if:</p> <p>(i) The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.</p> <p>(ii) The permittee designates less than 3.0% of the total number of valves as difficult-to-monitor, and</p> <p>(iii) The permittee follows a written plan that requires monitoring of the valve at least once per calendar year. [s. NR 445.07(1)(c), Wis. Adm. Code.] Compliance – The facility monitors each valve monthly. The facility logs any corrective actions taken and the time in which it was taken to bring each valve into the required operational parameters.</p> <p>(9) Delay of repair. (a) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.</p> <p>(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.</p> <p>(c) Delay of repair for valves will be allowed if:</p> <p>(i) The permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and</p> <p>(ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with (10) below.</p> <p>(d) Delay of repair for pumps will be allowed if:</p> <p>(i) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and</p> <p>(ii) Repair is completed as soon as practicable but not later than 6 months after the leak was detected.</p> <p>(e) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted and valve assembly supplies had been sufficiently stocked before the supplies were depleted.</p>	

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1. Acrylonitrile, Ethylene Oxide, Propylene Oxide, and Methyl Chloride

a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	<p>Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [s. NR 445.07(1)(c), Wis. Adm. Code.]</p> <p>Compliance – The facility corrects most leaks the same day a leak is detected. There was only one leak that last more than 15 days as a result a part that was needed to complete the repair. The facility sent report detailing the cause of the delay.</p> <p>(10) <i>Closed vent systems and control devices.</i> (a) The permittee using closed vent systems and control devices to comply with provisions of this section shall comply with the provisions of this section.</p> <p>(b) Vapor recovery systems (e.g., condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95% or greater.</p> <p>(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95% or greater or to provide a minimum residence time of 0.75 second at a minimum temperature of 816 °C.</p> <p>(d) Flares used to comply with this section shall comply with the requirements of s. NR 440.18, Wis. Adm. Code.</p> <p>(e) The permittee shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.</p> <p>(f) Closed vent system shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined by the methods specified in I.K.1.c.(5).</p> <p>(g) Closed vent systems and control devices used to comply with provisions of this section shall be operated at all times when emissions may be vented to them. [s. NR 445.07(1)(c), Wis. Adm. Code] Compliance – The facility operates the closed vent systems and control devices to the specifications required. The closed vent system is in place when VOC emissions are present, emissions are vented to condensation unit.</p> <p>ALTERNATIVE STANDARDS FOR VALVES.</p> <p>(11) <i>Allowable percentage of valves leaking.</i> (a) The permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0%.</p>	

K. P99 - Fugitive Emissions from Piping, Pumps, Valves, etc.

1. Acrylonitrile, Ethylene Oxide, Propylene Oxide, and Methyl Chloride

a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	<p>(b) The following requirements shall be met if the permittee wishes to comply with an allowable percentage of valves leaking:</p> <p>(i) The permittee shall notify the department that the permittee has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard.</p> <p>(ii) A performance test as specified in (c) below shall be conducted, annually, and at other times requested by the department.</p> <p>(iii) If a valve leak is detected it shall be repaired in accordance with (2) and (8)(d) above.</p> <p>(c) Performance tests shall be conducted in the following manner:</p> <p>(i) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in I.K.1.c.(4).</p> <p>(ii) If an instrument reading of 10,000 ppm or greater is measured a leak is detected.</p> <p>(iii) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.</p> <p>(d) The permittee who elects to comply with this alternative standard may not have an affected facility with a leak percentage greater than 2.0%. [s. MR 445.07(1)(c), Wis. Adm. Code.] Not Applicable</p> <p>(12) <i>Skip period leak detection and repair.</i> (a)(i) The permittee may elect to comply with one of the alternative work practices specified in (b)(ii) and(iii).</p> <p>(ii) The permittee shall notify the department before implementing one of the alternative work practices.</p> <p>(b)(i) The permittee shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in (8) above.</p> <p>(ii) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 the permittee may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.</p> <p>(iii) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 the permittee may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light</p>	

K. P99 - Fugitive Emissions from Piping, Pumps, Valves, etc.

1. Acrylonitrile, Ethylene Oxide, Propylene Oxide, and Methyl Chloride

a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	<p>liquid service.</p> <p>(iv) If the percent of valves leaking is greater than 2.0 the permittee shall comply with the requirements as described in (8) above but can again elect to use this subsection.</p> <p>(v) The percent of valves leaking shall be determined by dividing the sum of valves found leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements of this paragraph.</p> <p>(vi) The permittee shall keep a record of the percent of valves found leaking during each leak detection period. Not Applicable</p> <p>(13) The permittee may apply to the department for a determination of equivalence of a means of emission limitation to the requirements of (3), (4), (6), (7), (8), or (10). If the department makes a determination that a means of emission limitation is at least equivalent, the permittee shall notify the department of that determination and comply with its requirements rather than the requirements of (3), (4), (6), (7), (8), or (10). Not Applicable</p>	

ZZZ. Conditions Applicable to the Entire Facility.

1. Methyl Chloride Emissions		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) The permittee may not cause, allow, or permit emissions of methyl chloride in excess of 0.75 ton per month from the cryogenic condensation unit averaged over any 12 consecutive month period.¹¹ [s. 285.65(7), Wis. Stats] Compliance – The facility has a rolling monthly emission average less than 0.45 tons of methyl chloride emission per month during the last three years.</p>	<p>(1) The permittee shall calculate the total average monthly emissions of methyl chloride monthly from all sources over each 12 month consecutive month period using the data recorded under I.ZZZ.1.c.(1). [s. 285.65(7), Wis. Stats.] Compliance – The facility calculates the rolling monthly emissions of methyl chloride each month.</p>	<p>(1) The permittee shall maintain records of the monthly emissions of methyl chloride from all sources emitting methyl chloride. [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p> <p>(2) The permittee shall maintain records of the average monthly emissions of methyl chloride computed under I.ZZZ.1.b.(1). [s. NR 439.04(1)(d), Wis. Adm. Code.] Compliance</p>

¹¹ This emission limitation was requested by the facility to ensure that potential emissions of methyl chloride are less than 10 TPY making the facility an area source of hazardous air pollutants.

ZZZ. Conditions Applicable to the Entire Facility.

2. State Hazardous Air Pollutants (State HAPs).		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) No owner or operator of a source may cause, allow or permit emissions of a hazardous air contaminant listed in Table A of s. NR 445.07, Wis. Adm. Code in such quantity or concentration or for such duration as to cause an ambient air concentration of the contaminant off the source property that exceeds the concentration in column (g) of Table A for the contaminant. [s. NR 445.07(1)(a), Wis. Adm. Code]*</p> <p>Compliance</p>	<p>(1) The permittee shall only burn Group 1 virgin fossil fuels (Natural gas, propane, distillate #2 and diesel fuel oil) when firing any fuel combustion sources. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]*</p> <p>Compliance – The facility only uses virgin fossil fuels for combustion.</p> <p>(2) When the permittee elects to significantly change the existing operation (e.g., raw material or product change or production capacity increase), the permittee shall determine, either analytically or through the use of technical calculations, the facility’s new or increased potential emissions of any state hazardous air pollutant (State HAP) emitted, assuming maximum operation conditions. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]* Not applicable</p> <p>(3) The permittee shall determine if the facility’s new or increased potential emission rate of any State HAP exceeds the applicable published minimum value in Table A of s. NR 445.07, Wis. Adm. Code. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]* Not applicable</p> <p>(4) When the facility’s new or increased potential emission rate of any State HAP exceeds a published de minimus value, the permittee shall evaluate the impact of the pollutant’s emission and determine if any additional action needs to be taken to protect the ambient air quality standard. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]* Not applicable</p>	<p>(1) Whenever any hazardous air pollutant concentration or emission rate testing of any material is required for demonstrating compliance, the permittee shall use a test method and testing protocol approved by either the US EPA or the Department. [ss. NR 407.09(1)(c)1.a. & 4(a)1. and NR 439.06(8), Wis. Adm. Code]</p> <p>Compliance</p>

ZZZ. Conditions Applicable to the Entire Facility.

3. Stack Testing Requirements.		
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
<p>(1) If the compliance emission test(s) cannot be conducted within the time frames specified in this permit, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s). [s. NR 439.07, Wis. Adm. Code] Compliance – No test has been required by the Department.</p> <p>(2) All testing shall be performed with the emissions unit operating at capacity or as close to capacity as practicable and in accordance with approved procedures. If operation at capacity is not feasible, the source shall operate at a capacity level which is approved by the Department in writing. [s. NR 439.07(1), Wis. Adm. Code] Compliance</p> <p>(3) The Department shall be informed at least 20 working days prior to a stack testing, so a Department representative can witness the testing. At the time of notification, a compliance emission test plan shall also be submitted to the Department for approval. When approved in writing, an equivalent test method may be substituted for the reference test method. The notification and test plan shall be submitted to the Wisconsin Department of Natural Resources, South Central Region Air Program, Janesville Service Center, 2514 Morse Street, Janesville, WI 53545. [s. NR 439.07(2), Wis. Adm. Code] Compliance</p>	<p>(1) Two copies of the report on any compliance emission tests shall be submitted to the Department for evaluation within 60 days following the completion of tests. [s. NR 439.07(9), Wis. Adm. Code] Compliance</p>	<p>None Applicable.</p>

ZZZ. Conditions Applicable to the Entire Facility.

4. Compliance Reports/Records.	
a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION
<p>(1) The permittee shall submit periodic monitoring reports. [s. NR 407.09(1)(c)3., Wis. Adm. Code] Compliance – The facility submits monitoring report to the Department electronically in an appropriate manner. The facility puts all of the monitoring data from operations during the specified time period.</p> <p>(2) The permittee shall submit periodic certification of compliance. [s. NR 407.09(4)(a)3., Wis. Adm. Code] Compliance – The facility submits the compliance certification to the Department in an appropriate manner.</p> <p>(3) The records required under this permit shall be retained for at least five (5) years and shall be made available to department personnel upon request during normal business hours. [s. NR 439.04, s. NR 439.05, Wis. Adm. Code] Compliance</p>	<p>(1) The permittee shall submit a monitoring report which contains the results of monitoring or a summary of monitoring results required by this permit to the Department every six (6) months.</p> <p>(a) The time periods to be addressed by the submittal January 1 to June 30 and July 1 to December 31.</p> <p>(b) The report shall be submitted to the Wisconsin Department of Natural Resources South Central Region Air Program, Janesville Service Center, 2514 Morse Street, Janesville, WI 53545 within 30 days after the end of each reporting period.</p> <p>(c) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.</p> <p>(d) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report.</p> <p>(e) The content of the submittal is described in item D. of Part II of the operation permit. [ss. NR 407.09(1)(c)3. & NR 439.03(1)(b), Wis. Adm. Code] Compliance</p> <p>(2) The permittee shall submit an annual certification of compliance with the requirements of this permit to the Wisconsin Department of Natural Resources South Central Region Air Program, Janesville Service Center, 2514 Morse Street, Janesville, WI 53545.</p> <p>(a) The time period to be addressed by the report is January 1 to December 31 of the preceding year.</p> <p>(b) The report shall be submitted to the Wisconsin Department of Natural Resources within 30 days after the end of each reporting period.</p> <p>(c) The information included in the report shall comply with the requirements of Part II, Section N of this permit.</p> <p>(d) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [ss. NR 407.09(4)(a)3. & NR 439.03(1)(c), Wis. Adm. Code] Compliance</p>

ZZZ. Conditions Applicable to the Entire Facility.

5. National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources - 40 CFR Part 63, Subpart VVVVVV		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
<p>(1) What are the management practices and other requirements? (a) Management practices. The permittee must comply with the following paragraphs (a)(1) through (5) of this section:</p> <p>(1) Each process vessel must be equipped with a cover or lid that must be closed at all times when it is in organic HAP service or metal HAP service, except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. This requirement does not apply to process vessels containing only metal HAP that are in a liquid solution or other form that will not result in particulate emissions of metal HAP (e.g., metal HAP that is in ingot, paste, slurry, or moist pellet form or other form). Compliance – The permittee equips each process vessel with a lid that is closed at all times except</p> <p>(2) The permittee must use any of the methods listed in paragraphs (a)(2)(i) through (iv) of this section to control total organic HAP emissions from transfer of liquids containing Table 1 organic HAP to tank trucks or railcars. The permittee is not required to comply with this paragraph (a)(2) if the permittee has notified the Administrator in the initial notification that a material is reactive or resinous, and the permittee will not be able to comply with any of the methods in the following paragraphs (a)(2)(i) through (iv) of this section for the transfer of such material:</p> <p>(i) Use submerged loading or bottom loading. (ii) Route emissions to a fuel gas system or process in accordance with §63.982(d) of subpart SS. (iii) Vapor balance back to the storage tank or another storage tank connected by a common header. (iv) Vent through a closed-vent system to a control device. Compliance – The permittee transfers HAP containing substances using submerged loading. All emissions are vented through a closed system to a condenser control unit.</p> <p>(3) The permittee must conduct inspections of process vessels and equipment for each CMPU in organic HAP service or metal HAP service, as specified in the paragraphs (a)(3)(i) through (v) of this section, to demonstrate compliance with paragraph (a)(1) of this section and to determine that the process vessels and equipment are sound and free of leaks. Alternatively, except when the subject CMPU contains metal HAP as particulate, inspections may be conducted while the subject process vessels and equipment are in VOC service, provided that leaks can be detected when in VOC service.</p>	<p>(1) The permittee shall use the records required under I.ZZZ.5.c to demonstrate compliance with the applicable requirements under I.ZZZ.5.a.(1) through (5). [s. 285.65(13), Wis. Stats., and 40 CFR ss. 63.11495, 63.11496, 63.11497, 63.11498, and 63.114 499] Compliance</p>	<p>(1) What are the notification, recordkeeping, and reporting requirements, and how may I assert an affirmative defense for violation of emission standards during malfunction? (a) General provisions. The permittee must meet the requirements of the General Provisions in 40 CFR part 63, subpart A, as shown in Table 9 to this subpart VVVVVV. The General Provisions in other parts do not apply except when a requirement in an overlapping standard, which the permittee determined is at least as stringent as subpart VVVVVV and with which the permittee has opted to comply, requires compliance with general provisions in another part. (b) The permittee shall keep a copy of the notification of compliance status (NOCS) submitted to the USEPA in accordance with the requirements of §63.11501(b) of this subpart. (c) Recordkeeping. The permittee must maintain files of all information required by this subpart for at least 5 years following the date of each occurrence according to the requirements in §63.10(b)(1). If the permittee is subject, the permittee must comply with the recordkeeping and reporting requirements of §63.10(b)(2)(iii) and (vi) through (xiv), and the applicable requirements specified in the following paragraphs (c)(1) through (8) of this section: For each CMPU subject to this subpart, the permittee must keep the records specified in the following paragraphs (c)(1)(i) through (viii) of this section: (i) Records of management practice inspections, repairs, and reasons for any delay of repair, as specified in I.ZZZ.5.a.(1)(a).</p>

<p>(i) Inspections must be conducted at least quarterly.</p> <p>(ii) For these inspections, detection methods incorporating sight, sound, or smell are acceptable. Indications of a leak identified using such methods constitute a leak unless the permittee demonstrates that the indications of a leak are due to a condition other than loss of HAP. If indications of a leak are determined not to be HAP in one quarterly monitoring period, the permittee must still perform the inspection and demonstration in the next quarterly monitoring period.</p> <p>(iii) As an alternative to conducting inspections, as specified in paragraph (a)(3)(ii) of this section, the permittee may use Method 21 of 40 CFR part 60, appendix A-7, with a leak definition of 500 ppmv to detect leaks. The permittee may also use Method 21 with a leak definition of 500 ppmv to determine if indications of a leak identified during an inspection conducted in accordance with paragraph (a)(3)(ii) of this section are due to a condition other than loss of HAP. The procedures in this paragraph (a)(3)(iii) may not be used as an alternative to the inspection required by paragraph (a)(3)(ii) of this section for process vessels that contain metal HAP as particulate.</p> <p>(iv) Inspections must be conducted while the subject CMPU is operating.</p> <p>(v) No inspection is required in a calendar quarter during which the subject CMPU does not operate for the entire calendar quarter and is not in organic HAP service or metal HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required.</p> <p>Compliance – The permittee performs monthly inspections on the process vessels to check for leaks. Leaks that are detected are corrected in a timely manner.</p> <p>(4) The permittee must repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. For the purposes of this paragraph (a)(4), a leak will be considered “repaired” if a condition specified in the following paragraph (a)(4)(i), (ii), or (iii) of this section is met.</p> <p>(i) The visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated, or</p> <p>(ii) No bubbles are observed at potential leak sites during a leak check using soap solution, or</p> <p>(iii) The system will hold a test pressure.</p> <p>Compliance – The permittee corrects leaks in a timely manner.</p> <p>(5) You must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair.</p> <p>(b) Small heat exchange systems. For each heat exchange system subject to this subpart with a cooling water flow rate less than 8,000 gallons per minute (gal/min) and not meeting one or more of the conditions in §63.104(a), the permittee must comply with the following paragraphs (b)(1) through (3) of this section, or as an alternative, the permittee may comply with any one of the requirements in Item 1.a or 1.b of Table 8 to this subpart. Compliance – The permittee keeps records and dates of the inspections and of the maintenance performed.</p>		<p>(ii) Records of small heat exchange system inspections, demonstrations of indications of leaks that do not constitute leaks, repairs, and reasons for any delay in repair as specified in I.ZZZ.5.a.(1)(b).</p> <p>(iii) If batch process vent emissions are less than 10,000 lb/yr for a CMPU, records of batch process vent emission calculations, as specified in I.ZZZ.5.a.(2)(a)(2), the number of batches operated each month, as specified in I.ZZZ.5.a.(2)(a)(4), and any updated emissions calculations, as specified in I.ZZZ.5.a.(2)(a)(4). Alternatively, keep records of the worst-case processes or organic HAP usage, as specified in I.ZZZ.5.a.(2)(a)(3) and (5), respectively.</p> <p>(iv) Records of all TRE calculations for continuous process vents as specified in I.ZZZ.5.a.(2)(b)(3).</p> <p>(v) Records of metal HAP emission calculations as specified in I.ZZZ.5.a.(2)(d)(2) and (3). If total uncontrolled metal HAP process vent emissions from a CMPU subject to this subpart are estimated to be less than 400 lb/yr, also keep records of either the number of batches per month or operating hours, as specified in I.ZZZ.5.a.(2)(d)(3).</p> <p>(vi) Records identifying wastewater streams and the type of treatment they receive, as specified in Table 6 to this subpart.</p> <p>(vii) Records of the date, time, and duration of each malfunction of operation of process equipment, control devices, recovery devices, or continuous monitoring systems used to comply with this subpart that causes a failure to meet a standard. The record must include a list of the affected sources or equipment, an estimate of the</p>
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(6) The permittee must develop and operate in accordance with a heat exchange system inspection plan. The plan must describe the inspections to be performed that will provide evidence of hydrocarbons in the cooling water. Among other things, inspections may include checks for visible floating hydrocarbon on the water, hydrocarbon odor, discolored water, and/or chemical addition rates. The permittee must conduct inspections at least once per quarter, even if the previous inspection determined that the indications of a leak did not constitute a leak as defined by §63.104(b)(6). **Compliance – The permittee performs inspections.**

(7) The permittee must perform repairs to eliminate the leak and any indications of a leak or demonstrate that the HAP concentration in the cooling water does not constitute a leak, as defined by §63.104(b)(6), within 45 calendar days after indications of the leak are identified, or the permittee must document the reason for any delay of repair in the next semiannual compliance report. **Compliance – The permittee corrects leaks in a timely manner.**

(8) The permittee must keep records of the dates and results of each inspection, documentation of any demonstrations that indications of a leak do not constitute a leak, the dates of leak repairs, and, if applicable, the reasons for any delay in repair.

(a) **Startup, shutdown and malfunction.** Startup, shutdown, and malfunction (SSM) provisions in subparts that are referenced in paragraphs (a) and (b) of this section do not apply.

(b) **General duty.** At all times, the permittee must operate and maintain any affected CMPU, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the CMPU. [s. 285.65(13), Wis. Stats., and 40 CFR 63.11495]

Compliance – The permittee performs inspections once each month to check for leaks. The facility documents the days in which the inspections take place and when any applicable repairs take place.

(9) **What are the standards and compliance requirements for process vents?**

(a) **For Organic HAP listed in Table 1 of Subpart VVVVVV emissions from batch process vents,** the permittee must comply with the requirements in the following paragraphs (a)(1) through (5) of this section for organic HAP emissions from batch process vents for each CMPU using Table 1 organic HAP:

(1) If uncontrolled organic HAP emissions from all batch process vents from a CMPU subject to this subpart are equal to or greater than 10,000 pounds per year (lb/yr), the

volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions.

(viii) Records of actions taken during periods of malfunction to minimize emissions in accordance with I.ZZZ.5.a.(1)(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(2) For batch process vents subject to Table 2 to this subpart and continuous process vents subject to Table 3 to this subpart, the permittee must keep records specified in the following paragraphs (c)(2)(i) or (ii) of this section, as applicable:

(i) If you route emissions to a control device other than a flare, keep records of performance tests, if applicable, as specified in §63.998(a)(2)(ii) and (4), keep records of the monitoring system and the monitored parameters, as specified in §63.998(b) and (c), and keep records of the closed-vent system, as specified in §63.998(d)(1). If you use a recovery device to maintain the TRE above 1.0 for a continuous process vent, keep records of monitoring parameters during the TRE index value determination, as specified in §63.998(a)(3).

(ii) If the permittee routes emissions to a flare, keep records of the flare compliance assessment, as specified in §63.998(a)(1)(i), keep records of the pilot flame monitoring, as specified in §63.998(a)(1)(ii) and (iii), and keep records of the closed-vent system, as specified in §63.998(d)(1).

(3) For metal HAP process vents subject to Table 4 to this subpart, the permittee must keep records specified in the following paragraphs (c)(3)(i) or (ii) of this section, as applicable:

permittee must also comply with the emission limits and other requirements in Table 2 to this subpart as:

i. For batch process vents in a CMPU at an existing source for which the total organic HAP emissions are equal to or greater than 10,000 lb/yr, the permittee shall:

a. Reduce collective uncontrolled total organic HAP emissions from the sum of all batch process vents by ≥ 85 percent by weight or to ≤ 20 ppmv by routing emissions from a sufficient number of the batch process vents through a closed vent system to any combination of control devices (except a flare) in accordance with the requirements of §63.982(c) and the requirements referenced therein; or

b. Route emissions from batch process vents containing at least 85 percent of the uncontrolled total organic HAP through a closed-vent system to a flare (except that a flare may not be used to control halogenated vent streams) in accordance with the requirements of §63.982(b) and the requirements referenced therein; or

c. Comply with the alternative standard specified in §63.2505 and the requirements referenced therein; or

d. Comply with combinations of the requirements in Items a., b., and c. of this Table for different groups of batch process vents.

ii. For batch process vents in a CMPU at a new source for which the total organic HAP emissions are equal to or greater than 10,000 lb/yr, the permittee shall comply with any of the emission limits in Items 1.a through 1.d of this Table, except 90 percent reduction applies instead of 85 percent reduction in Item 1.a, and 90 percent of the emissions must be routed to a flare instead of 85 percent in Item 1.b.

Compliance – The permittee vents all organic HAP emissions to a cryogenic condenser to control emission. The cryogenic condenser controls more than 85% of organic HAP emissions.

(2) The permittee must determine the sum of actual organic HAP emissions from all of the batch process vents within a CMPU subject to this subpart using process knowledge, engineering assessment, or test data. Emissions for a standard batch in a process may be used to represent actual emissions from each batch in that process. The permit must maintain records of the calculations. Calculations of annual emissions are not required if the permittee meets the emission standards for batch process vents in Table 2 to this subpart. **Compliance – The permittee calculates the amount of organic HAP emissions that are vented to control equipment. The standard batch value is used. The facility does have documentation as to how the calculations are made.**

(3) As an alternative to calculating actual emissions for each affected CMPU at the facility, the permittee may elect to estimate emissions for each CMPU based on the emissions for the worst-case CMPU. The worst-case CMPU means the CMPU at the affected source with

(i) For a new source using a control device other than a baghouse and for any existing source, maintain a monitoring plan, as specified in I.ZZZ.5.a.(2)(d)(4)(i), and keep records of monitoring results, as specified in I.ZZZ.5.a.(2)(d)(4).

(ii) For a new source using a baghouse to control metal HAP emissions, keep a site-specific monitoring plan, as specified in I.ZZZ.5.a.(2)(d)(5) and §63.11410(g) of this subpart, and keep records of bag leak detection systems, as specified in I.ZZZ.5.a.(2)(d)(5) and §63.11410(g)(4) of this subpart.

(4) For each storage tank subject to Table 5 to this subpart, you must keep records specified in paragraphs (c)(4)(i) through (vi) of this section, as applicable.

(i) Keep records of the vessel dimensions, capacity, and liquid stored, as specified in §63.1065(a).

(ii) Keep records of each inspection of an internal floating roof, as specified in §63.1065(b)(1).

(iii) Keep records of each seal gap measurement for external floating roofs, as specified in §63.1065(b)(2), and keep records of inspections of external floating roofs, as specified in §63.1065(b)(1).

(iv) If the permittee vents emissions to a control device other than a flare, the permittee must keep records of the operating plan and measured parameter values, as specified in §§63.985(c) and 63.998(d)(2).

(v) If the permittee vents emissions to a flare, the permittee must keep records of all

the highest organic HAP emissions per batch. The worst-case emissions per batch are used with the number of batches run for other affected CMPU. Process knowledge, engineering assessment, or test data may be used to identify the worst-case process. The permittee must keep records of the information and procedures used to identify the worst-case process.

Compliance

(4) If your current estimate is that emissions from batch process vents from a CMPU are less than 10,000 pounds per year (lb/yr), then the permittee must keep a record of the number of batches of each process operated per month. Also, the permittee must reevaluate total emissions from batch process vents prior to making any process changes that affect emission calculations in paragraphs (a)(2) and (3) of this section. If projected emissions increase to 10,000 lb/yr or more, the permittee must be in compliance options for batch process vents in Table 2 to this subpart upon initiating operation under the new operating conditions. The permittee must maintain records documenting the results of all updated emissions calculations. **Compliance – The permittee documents the batch history of production each month. The facility uses the standard emissions from each batch to determine the emission inventory. The permittee emits less than 10,000 pounds of organic HAPs each year.**

(5) As an alternative to determining the HAP emissions, the permittee may elect to demonstrate that the amount of organic HAP used in the process is less than 10,000 lb/yr. The permittee must keep monthly records of the organic HAP usage. **Not Applicable**

(10) **Organic HAP emissions from continuous process vent.** The permittee must comply with the requirements in the following paragraphs (b)(1) through (4) of this section for each CMPU subject to this subpart using Table 1 organic HAP:

- (i). If the total resource-effectiveness (TRE) index value for a continuous process vent is less than or equal to 1.0, the permittee must :
 - a. Reduce emissions of total organic HAP by ≥ 95 percent by weight (≥ 85 percent by weight for periods of startup or shutdown) or to ≤ 20 ppmv by routing emissions through a closed vent system to any combination of control devices (except a flare) in accordance with the requirements of §63.982(c) and the requirements referenced therein; or
 - b. Reduce emissions of total organic by HAP by routing all emissions through a closed-vent system to a flare (except that a flare may not be used to control halogenated vent streams) in accordance with the requirements of §63.982(b) and the requirements referenced therein, or
 - c. Comply with the alternative standard specified in §63.2505 and the requirements referenced therein

periods of operation during which the flare pilot flame is absent, as specified in §§63.987(c) and 63.998(a)(1), and keep records of closed-vent systems, as specified in §63.998(d)(1).

(vi) For periods of planned routine maintenance of a control device, the permittee must keep records of the day and time at which each maintenance period begins and ends, and keep records of the type of maintenance performed, as specified in I.ZZZ.5.a.(b)(3).

(5) For each wastewater stream subject to Item 2 in Table 6 to this subpart, keep records of the wastewater stream identification and the disposition of the organic phase(s), as specified in Item 2 to Table 6 to this subpart.

(6) For each large heat exchange system subject to Table 8 to this subpart, the permittee must keep records of detected leaks; the date the leak was detected; if demonstrated not to be a leak, the basis for that determination; the date of efforts to repair the leak; and the date the leak is repaired, as specified in Table 8 to this subpart.

(7) The permittee must keep a record of all transferred liquids that are reactive or resinous materials, as defined in §63.11502(b) of this subpart, and not included in the NOCS.

(8) For continuous process vents subject to Table 3 to this subpart, keep records of the occurrence and duration of each startup and shutdown of operation of process equipment, or of air pollution control and monitoring equipment.

(d) **Semiannual Compliance Reports.** The permittee must submit semiannual compliance reports along with the Title V reports giving

(ii) For each continuous process vent with total resource effectiveness (TRE) >1.0 but ≤4.0, the permittee shall comply with the requirements of §63.982(e) and the requirements specified therein if a recovery device, as defined in §63.11502, is used to maintain a TRE >1.0 but ≤4.0, the permittee shall:

(1) The permittee must determine the TRE index value according to the procedures in §63.115(d), except as specified in the following paragraphs (b)(2)(i) through (iii) of this section:

(i) The permittee is not required to calculate the TRE index value if the permittee controls emissions in accordance with Table 3 to this subpart.

(ii) Sections 63.115(d)(1)(i) and (ii) are not applicable for the purposes of this paragraph (b)(2)(ii).

(iii) The permittee may assume the TRE for a vent stream is >1.0 if the amount of organic HAP emitted in the vent stream is less than 0.1 pound per hour.

Not Applicable

(11) If the current TRE index value is greater than 1, the permittee must recalculate the TRE index value before making any process or operational change that affects parameters in the calculation. If the recalculated TRE is less than or equal to 1.0, then the permittee must comply with one of the compliance options for continuous process vents in Table 3 to this subpart before operating under the new operating conditions. The permittee must maintain records of all TRE calculations. **Not Applicable**

(12) If a recovery device as defined in §63.11502 is used to maintain the TRE index value at a level greater than 1.0 and less than or equal to 4.0, the permittee must comply with §63.982(e) and the requirements specified therein.

(a) **Combined streams.** For the streams consisting of HAP emissions from batch process vents and continuous process vents, the permittee must comply with the more stringent standard in Table 2 or Table 3 to this subpart that applies to any portion of the combined stream, or the permittee must comply with Table 2 for the batch process vents and Table 3 for the continuous process vents. The TRE index value for continuous process vents and the annual emissions from batch process vents shall be determined for the individual streams before they are combined, and prior to any control (e.g., by subtracting any emission contributions from storage tanks, continuous process vents or batch process vents, as applicable), in order to determine the most stringent applicable requirements.

details of deviations to this subpart VVVVVV including the malfunctions given in d(1) below.

(1) **Malfunctions.** If a malfunction occurred during the reporting period, the report must include the number of instances of malfunctions that caused emissions in excess of a standard. For each malfunction that caused emissions in excess of a standard, the report must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with I.ZZZ.5.a.(1)(d), including actions taken to correct a malfunction.

(e) **Affirmative defense for violation of emission standards during malfunction.** In response to an action to enforce the standards set forth in I.ZZZ.5.a.(1) through (5), the permittee may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed if the facility fail to meet the burden of proving all of the requirements in the affirmative defense as indicated in paragraphs (e)(1) through (3) of §63.11501 to subpart VVVVVV. The affirmative defense shall not available for claims for injunctive relief.

[s. 285.65(13), Wis. Stats., and 40 CFR s. 63.11501]

(b) Emissions from metal HAP process vents. For such vents, the permittee shall comply with the paragraphs (d)(1)-(5) shown below. The requirements of this paragraph do not apply to metal HAP vents from CMPU containing only metal HAP that are in a liquid solution or other form that will not result in particulate emissions of metal HAP. **Not Applicable**

(13) If the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then the permittee must also comply with the emission limits and other requirements in Table 4, as given below under (d)(1)(i), to this subpart and in paragraph (d)(4), (5), or (6) of this section.

(i) For total metal HAP ≥ 400 lb/yr, the permittee is required to reduce collective uncontrolled emissions of total metal HAP emissions by ≥ 95 percent by weight by routing emissions from a sufficient number of the metal process vents through a closed-vent system to any combination of control devices, according to the requirements of (d)(4), (5), or (6).

Not Applicable – Metal HAP emissions are less than 400 pounds per year.

(14) The permittee must determine the sum of metal HAP emissions from all metal HAP process vents within a CMPU subject to this subpart, except you are not required to determine the annual emissions if the permittee controls the metal HAP process vents within a CMPU in accordance with Table 4 to this subpart or if the permittee determines total metal HAP usage in the process unit is less than 400 lb/yr. To determine the mass emission rate the permittee may use process knowledge, engineering assessment, or test data. The permittee must keep records of the emissions calculations. **Not Applicable**

(15) If the current estimate is that total uncontrolled metal HAP emissions from a CMPU subject to this subpart are less than 400 lb/yr, then the permittee must keep records of either the number of batches operated per month (batch vents) or the process operating hours (continuous vents). Also, the permittee must reevaluate the total emissions before the permittee makes any process or operational change that affects emissions of metal HAP. If projected emissions increase to 400 lb/yr or more, then the permittee must be in compliance with one of the options for metal HAP process vents in Table 4 to this subpart upon initiating operation under the new operating conditions. The permittee must keep records of all recalculated emissions determinations **Compliance – The permittee keeps records of the batches made each month with the corresponding emissions.**

(16) If the permittee has an existing source subject to the HAP metals emission limits specified in Table 4 to this subpart, the permittee must comply with the initial compliance and monitoring requirements in as given below under paragraphs (d)(4)(i) through (iii) of this section. The permittee must keep records of monitoring results to demonstrate continuous compliance.

(i) The permittee must prepare a monitoring plan containing the information in paragraphs (d)(4)(i)(A) through (E) of this section. The plan must be maintained on-site and be

available on request. The permittee must operate and maintain the control device according to a site-specific monitoring plan at all times.

(A) A description of the device;

(B) Results of a performance test or engineering assessment conducted in accordance with paragraph (d)(4)(ii) of this section verifying the performance of the device for reducing HAP metals or particulate matter (PM) to the levels required by this subpart;

(C) Operation and maintenance plan for the control device (including a preventative maintenance schedule consistent with the manufacturer's instructions for routine and long-term maintenance) and continuous monitoring system (CMS).

(D) A list of operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limits; and

(E) Operating parameter limits based on either monitoring data collected during the performance test or established in the engineering assessment.

(ii) The permittee must conduct a performance test or an engineering assessment for each CMPU subject to a HAP metals emissions limit in Table 4 to this subpart and report the results in your Notification of Compliance Status (NOCS). Each performance test or engineering assessment must be conducted under representative operating conditions, and sampling for each performance test must be conducted at both the inlet and outlet of the control device. Upon request, the permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. If the permittee own or operate an existing affected source, the permittee is not required to conduct a performance test if a prior performance test was conducted within the 5 years prior to the effective date using the same methods specified in paragraph (d)(4)(iii) of this section, and, either no process changes have been made since the test, or, if the permittee can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

(iii) If the permittee elects to conduct a performance test, it must be conducted according to requirements in §63.11410(j)(1). As an alternative to conducting a performance test using Method 5 or 5D to determine the concentration of PM, the permittee may use Method 29 in 40 CFR part 60, appendix A-8 to determine the concentration of HAP metals. The permittee has demonstrated initial compliance if the overall reduction of either HAP metals or total PM is equal to or greater than 95 percent. **Not Applicable**

(17) If the permittee has a new source using a baghouse as a control device, the permittee must install, operate, and maintain a bag leak detection system on all baghouses used to

comply with the HAP metals emissions limit in Table 4 to this subpart. The permittee must comply with the testing, monitoring, and recordkeeping requirements in §63.11410(g), (i), and (j)(1), except the permittee is not required to submit the monitoring plan required by §63.11410(g)(2) for approval. **Not Applicable -- The permittee does not have a baghouse**

(18) If the permittee has a new source using a control device other than a baghouse to comply with the HAP metals emission limits in Table 4 to this subpart, the permittee must comply with the initial compliance and monitoring requirements in paragraphs (d)(4)(i) through (iii) of this section. [s. 285.65(13), Wis. Stats., and 40 CFR s. 63.11496] **Not Applicable -- The permittee does not have a baghouse.**

(19) What are the standards and compliance requirements for storage tanks?

(a) The permittee must comply with the following emission limits and other requirements in Table 5 to this subpart and in paragraph (b) of this section for organic HAP emissions from each of the storage tanks that meet the applicability criteria in Table 5 to this subpart. The permittee shall comply with the Table 5 requirements as:

1. For storage tank with a design capacity $\geq 40,000$ gallons, storing liquid that contains organic HAP listed in Table 1 to this subpart, and for which the maximum true vapor pressure (MTVP) of total organic HAP at the storage temperature is ≥ 5.2 kPa and < 76.6 kPa, the permittee shall:

- a. Comply with the requirements of subpart WW of this part;
- b. Reduce total organic HAP emissions by ≥ 95 percent by weight by operating and maintaining a closed-vent system and control device (other than a flare) in accordance with §63.982(c); or
- c. Reduce total HAP emissions by operating and maintaining a closed-vent system and a flare in accordance with §63.982(b); or
- d. Vapor balance in accordance with §63.2470(e); or
- e. Route emissions to a fuel gas system or process in accordance with the requirements in §63.982(d) and the requirements referenced therein. **Not Applicable – No tanks are greater than 40,000 gallons.**

2. For storage tank with a design capacity $\geq 20,000$ gallons and $< 40,000$ gallons, storing liquid that contains organic HAP listed in Table 1 to this subpart, and for which the MTVP

of total organic HAP at the storage temperature is ≥ 27.6 kPa and < 76.6 kPa, the permittee shall:

a. Comply with one of the options in Item 1 of Table 5 to this subpart. **Compliance – The only tank this size is the Methyl Chloride. The uses submerged pipes to transfer the Methyl Chloride. The permittee controls the temperature to maintain the vapor pressure of the material.**

3. Storage tank with a design capacity $\geq 20,000$ gallons, storing liquid that contains organic HAP listed in Table 1 to this subpart, and for which the MTVP of total organic HAP at the storage temperature is ≥ 76.6 kPa, the permittee shall comply with option b, c, d, or e in Item 1 of Table 5 to this subpart.

(b) Planned routine maintenance for a control device. The permittee shall operate in accordance with the following paragraphs (b)(1) through (3) of this section for periods of planned routine maintenance of a control device for storage tanks:

(1) Add no material to the storage tank during periods of planned routine maintenance.

(2) Limit periods of planned routine maintenance for each control device (or series of control devices) to no more than 240 hours per year (hr/yr), or submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed and it must be submitted at least 60 days before the 240-hour limit will be exceeded.

(3) Keep records of the day and time at which planned routine maintenance periods begin and end, and keep a record of the type of maintenance performed.

(c) References to SSM provisions in subparts that are referenced in paragraphs (a) or (b) of this section or Table 5 to this subpart do not apply.

[s. 285.65(13), Wis. Stats., and 40 CFR s. 63.11497] **Compliance**

(4) What are the standards and compliance requirements for wastewater systems?

(a) The permittee must comply with the requirements in paragraph (a)(1) and (4):

(1) If the partially soluble HAP concentration in a wastewater stream is equal to or greater than 10,000 parts per million by weight (ppmw) and the wastewater stream contains a

separate organic phase, then the permittee must also comply with Table 6, Item 2 to this subpart for that wastewater stream as given below.

(i) For wastewater stream, the permittee shall:

a. Discharge to onsite or offsite wastewater treatment or hazardous waste treatment.

(ii) For wastewater stream containing partially soluble HAP at a concentration $\geq 10,000$ ppmw, the permittee shall:

a. Use a decanter, steam stripper, thin film evaporator, or distillation unit to separate the water phase from the organic phase(s); or

b. Hard pipe the entire wastewater stream to onsite treatment as a hazardous waste, or hard pipe the entire wastewater stream to a point of transfer to onsite or offsite hazardous waste treatment. **Compliance – The wastewater has organics phase separated for incineration and water treated in Milton POTW or offsite disposal.**

(2) Except as specified in paragraph (a)(2) of this section, you must determine the total concentration of partially soluble HAP in each wastewater stream using process knowledge, engineering assessment, or test data. Also, you must reevaluate the concentration of partially soluble HAP if you make any process or operational change that affects the concentration of partially soluble HAP in a wastewater stream. **Compliance**

(3) The permittee is not required to determine the partially soluble concentration in wastewater that is hard piped to a combustion unit or hazardous waste treatment unit, as specified in Table 6, Item 2.b to this subpart. **Compliance**

(4) Separated organic material that is recycled to a process is no longer wastewater and no longer subject to the wastewater requirements after it has been recycled.

(b) The requirements in Item 2 of Table 6 to this subpart do not apply during periods of startup or shutdown. References to SSM provisions in subparts that are referenced in paragraph (a) of this section or Table 6 to this subpart do not apply.

[s. 285.65(13), Wis. Stats., and 40 CFR s. 63.11498] **Compliance**

(5) **What are the standards and compliance requirements for heat exchange systems?**

<p>(a) If the cooling water flow rate in the heat exchange system is equal to or greater than 8,000 gal/min and is not meeting one or more of the conditions in §63.104(a), then you must comply with one of the requirements specified in Table 8 to this subpart as:</p> <p>1. For each heat exchange system with a cooling water flow rate $\geq 8,000$ gal/min and not meeting one or more of the conditions in §63.104(a), the permittee shall:</p> <p>a. Comply with the monitoring requirements in §63.104(c), the leak repair requirements in §63.104(d) and (e), and the recordkeeping and reporting requirements in §63.104(f); or</p> <p>b. Comply with the heat exchange system requirements in §63.104(b) and the requirements referenced therein.</p> <p>(b) For equipment that meets Current Good Manufacturing Practice (CGMP) requirements of 21 CFR part 211, the permittee may use the physical integrity of the reactor as the surrogate indicator of heat exchanger system leaks when complying with Item 1.a in Table 8 to this subpart.</p> <p>(c) Any reference to SSM provisions in other subparts that are referenced in paragraphs (a) and (b) of this section or Table 8 to this subpart do not apply.</p> <p>[s. 285.65(13), Wis. Stats., and 40 CFR s. 63.11499] Compliance – The cooling water flow rate is less than 8,000 gallons per minute.</p>		
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FACILITY REPORTING REQUIREMENTS:

Requirement	Frequency and/or Due Date	Compliance Status
Semi-Annual Compliance Monitoring Report	Due within 30 days after the end of each reporting period (January 1 to June 30 and July 1 to December 31)	Compliance
Compliance Certification Reports	Due Jan. 30 of each year	Compliance

RESULTS OF PREVIOUS FCE REPORTS/SITE VISITS:

FCE Report Date	Result	Comments
Insp. Date – June 1, 2016 Report Date – June 10, 2016	C – In Compliance	Inspection type - Full Compliance Evaluation Inspector – Megan Corrado
Insp. Date - August 17, 2010 Report Date - September 15, 2010	C – In Compliance	Inspection type - Full Compliance Evaluation Inspector - Brian Barbieur

RESULTS OF PREVIOUS EMISSION TESTS:

Source	Test Date	Pollutant(S)	Result	Comments
S03/P03 (R3 & R5)	February 2, 3, 5, 13, 14, 15, 2007 & May 18, 2007	Ethylene Oxide	100% control	Compliance, limit = 99 % control
		Acrylonitrile	99.2% control	Compliance, limit = 99 % control
		Methyl chloride	97.6% control	Compliance
		Ammonia	100% control	Compliance
S03/P03 (R3 & R5)	May 28, 1996 & July 8-10, 1996	Ethylene Oxide	99.5 % control	Compliance, limit = 99 % control
		Acrylonitrile	99.8 % control	Compliance, limit = 99 % control
		Methyl chloride	4.02 lb/hr	Compliance, limit = 8.8 lb/hr
		Total VOC	99.2 %	Compliance, limit = 85 % control

SUMMARY OF PREVIOUS COMPLAINTS: None on file**SUMMARY OF PREVIOUS ENFORCEMENT ACTIONS:**

The last Notice of Violation (NOV) was in 1993.

INSPECTION FIELD NOTES AND DISCUSSION

On April 26, 2018 Samuel Saeian, of the WDNR, arrived at Evonik Materials Corp Milton at 12:00 PM. The sky was partly cloudy, with a temperature around 60°F, there was little wind near the facility, and there were no noticeable odors identified that appeared to be emanating from the facility. Mr. Saeian was greeted by Sondra Klipp who is the environmental manager for the facility. Ms. Klipp gave Mr. Saeian a presentation as to an overview and history of the facility. During the presentation David Ausloos, Evonik's Production Manager for the Milton facility, joined the meeting. Mr. Saeian led a discussion on the facility's current air permit. Most of the records had been reviewed from Ms. Klipp's emails containing pertinent information requested by Mr. Saeian and from the monitoring reports that have been submitted to the Department prior to the inspection. Mr. Saeian asked a few questions as to how certain operations worked particularly as to the interlocked nature of the controls as to when ammonia or methyl chloride is present. When ammonia is present the facility has interlocks that require emissions must go through the ammonia control device. When methyl chloride, propylene oxide and other VOCs are present, emissions from the reactors are vented to the cryogenic

condenser. The incinerator will only allow VOCs and HAPs to be burned when the temperature is reaches 545⁰F. The incinerator operates for short periods of times to destroy such substances.

After the discussion Ms. Klipp and Mr. Ausloos gave Mr. Saeian a tour of the facility of the facility. In the control room Mr. Saeian was showed how the operations are monitored. The cryogenic condenser was operating at the time of the inspection. The incinerator was not operating during the inspection. The maintenance shop was clean and organized. Mr. Saeian was showed the database that generates all maintenance work orders, SAP. SAP automatically generates work orders that must be completed within a time frame for the facility to stay in compliance with the manufactures specifications the equipment on site. At 2:30 PM Mr. Saeian left the facility.

PERMIT REVISIONS: All language in red text can be considered to be removed from the permit.

Consider removing aspects from I.ZZZ.5, “5. National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources - 40 CFR Part 63, Subpart VVVVVV” that are already present in the main body of the permit and remove aspects that are not applicable.

RECOMMENDATIONS/CONCLUSIONS

Based on my review of the department files, the records I reviewed on site, the plant site inspection, and the conversations with Evonik Milton’s representatives, I determined that Evonik Milton is in compliance with all aspects of their air permit.

SAFETY EQUIPMENT REQUIRED TO GAIN ACCESS TO SITE:

- HEARING PROTECTION
- HARD HAT
- SAFETY GLASSES
- BOOTS
- OTHER (e.g. Safety Vest and Dust Mask) **SPECIFY:** _____