**AIR POLLUTION CONTROL OPERATION PERMIT**

EI FACILITY NO: 471006470

OPERATION PERMIT NO.: 471006470-P22

TYPE: Part 70

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

Name of Source: Fox River Valley Ethanol, LLC

Street Address: 4995 State Road 91
Oshkosh, Winnebago County, Wisconsin

Responsible Official, & Title: Mr. Neal Kemmet, President & General Manager

is authorized to operate an ethanol fermentation and distillation plant in conformity with the conditions herein.

This operation permit expires on **January 25, 2021.** [s. NR 407.09(1)(b)1., Wis. Adm. Code] No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely application for renewal of the permit. If a timely application for renewal has been submitted, the existing operation permit will not expire until the renewal application has been finally acted upon by DNR. [ss. 227.51(2), 285.62(8)(b), Wis. Stats. and NR 407.04(2), Wis. Adm. Code] A renewal application must be submitted at least 6 months, but not more than 18 months, prior to the expiration date of the revised operation permit listed above. [ss. 285.66(3)(a), Wis. Stats. and NR 407.04(2), Wis. Adm. Code]

The conditions in this permit that originated in a construction permit are permanent and may only be revised through a revision of the construction permit condition, revision of a construction permit, or through the issuance of a new construction permit. [s. 285.66(1), Wis. Stats.]

Conditions of the permit marked with an asterisk (*) have been created outside of Wisconsin's federally approved State Implementation Plan (SIP) and are not federally enforceable.

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

Dated at Oshkosh, Wisconsin September 1, 2017

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By /s/ Imelda Hofmeister
Imelda Hofmeister, Environmental Engineer Supervisor

## PREAMBLE TO OPERATION PERMIT

An Asterisk (*) throughout this document denotes legal authority, limitations and conditions which are not federally enforceable. [s. NR 407.09(3)(b), Wis. Adm. Code]

**Historical Summary of Permits/Orders Issued to the Facility.**

| Permit/Order No. | Issuance Date | Sources Covered & Description[1] | Permit Status |
|---|---|---|---|
| 02-DCF-023 | July 12, 2002 | Total Facility | Adopted by 471006470-P01 |
| 03-DCF-250 | September 1, 2005 | Facility expansion from 27.3 to 54.6 MMGY; P01, P02; P20 - P24, F01; P04-P07; P43-P49; P50-P56; B90, B91; F04; B70; B71; T01-T04; F02; F03; F05; T05; T06-T09 | Adopted by 471006470-P01 |
| 04-DCF-295 | October 20, 2006 | Operational improvements; P01, P02; P20 - P24, F01; P04-P07; P43-P49; P50-P56; B90, B91; F04; B70; B71; T01-T04; F02; F03; F05; T05; T06-T09; T10 | Adopted by 471006470-P01 |
| 471006470-P01 | December 6, 2010 | Total Facility | Revised by 471006470-P02 |
| 06-JJW-281 | November 27, 2006 | Facility optimization increasing estimated throughput from 54.6 to 63MMGY, stack height and emission limitation changes, monitoring changes; P10; P18; P20; P31-P38; P39A&B; P95; T01-T10; F01; F02 | Adopted by 471006470-P02 |
| 471006470-P02 | January 16, 2007 | Total Facility | Renewed by 471006470-P10 |
| 471006470-P10 | June 20, 2011 | Total Facility | Revised by 471006470-P11 |
| 12-JJW-004 | March 5, 2012 | T11, F06 | Adopted by 471006470-P11 |
| 471006470-P11 | September 20, 2012 | Total Facility | Revised by 471006470-P12 |
| 471006470-P12 | November 19, 2013 | Ownership change | Revised by 471006470-P13 |
| 14-JJW-037-EXM | March 3, 2014 | P31A, P33A | Adopted by 471006470-P13 |
| 471006470-P13 | June 9, 2014 | Total Facility | Renewed by 471006470-P20 |
| 471006470-P20 | January 25, 2016 | Total Facility | Revised by 471006470-P21 |
| 16-JJW-075 | July 20, 2016 | F10, P35A, P36A, P60, P62, P63, P64, P65 | Adopted by 741006470-P22 |
| 471006470-P21 | July 18, 2016 | Installation of a new ethanol recovery unit condenser, P57 | Revised by 741006470-P22 |
| 17-JJW-059 | June 13, 2017 | Throughput increase; and P57, P43, P44A-K, P41, P42, P50, P51, P52, P53, P70, P54, P65, P71, P55, P56, P50B, P51B, P52B, P53B, P54B, P55B, P56B, F04, T02, T04, T01, T03, T10, T11, T12, F03, F06 | Adopted by 741006470-P22 |
| 471006470-P22 | September 1, 2017 | Total Facility | Primary Compliance Document |

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

**Stack and Process Index.**

A. Process P60, Stack S60, Control C60 – Column Dryer

B. Process P62, Stack S62, Control C62 – Dryer Silo #1 (North)
Process P63, Stack S63, Control C63 – Dryer Silo #2 (South)

C. Process P64, Stack S64, Control C64 – Wet Grain Receiving Pit & Auger #3

D. Fugitive F10 – Wet Grain Receiving Pit & Auger #3
Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures)

E. Process P21, P22, P23, P24, P24B, P25, P26, Stack S20, Control C20 - Elevators (#1 - 15,000 Btu/hr, #2 - 54,771 Bu/day), Screening bin, Storage bins (#1, #2 - 100,000 Bu each; #3 - 200,000 Bu), Hammermills (#1, #2)

F. Process P20, Stack S21, Control C21 - Corn Dump Pit / Auger #2

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

G. Process P18, P10, Stack F10 - Corn Dump Pit / Auger #1, #2, Corn Storage Building, Elevators, Other Misc. Grain Handling Fugitive Emissions

H. Process P30, Stack S31A, S33A, S35A, S36A - Cooling Towers (4)
Process P95, Stack S95 - Cooling Tower (1)

I. Stack S40, Control C40, C40B - $CO_2$ Scrubbers (2), Process P57 – Ethanol Recovery Unit Condenser, Fermentation and Related Processes: Process P43 - Beerwell (424,000 gallons); Process P44A-K - Fermenters #1 - #11 (366,600 gallons each); Process P41 - Yeast Tank #1 (180,000 gal.); Process P42 - Yeast Tank #2 (30,000 gal.)

J. Stack S50; Control C50; Distillation and Related Processes: Process P50 - Molecular Sieve; Process P51 - Evaporator; Process P52 - Rectifier; Process P53 - Side Stripper; Process P65 - Liquefaction Tank (45,000 gal.); Process P70 - Modular Ethanol Dehydration System; Process P54 and Process P71 - Slurry Tank; Process P55 - Beer Stripper; Process P56 - De-Gas vessel; Process P50B - Molecular Sieve; Process P51B - Evaporator; Process P52B - Rectifier; Process P53B - Side Stripper; Process P54B - Slurry Tank; Process P55B - Beer Stripper; Process P56B - De-Gas Vessel

K. Burner B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators

L. Process F04 - Process Equipment (Valves, Pumps, Flanges, etc.) Leaks

M. Boiler B70, B71, Stack S70, S71 - 95 million Btu/hr Natural Gas Fired Boilers (Each)

N. Tank T05 - 12,800 gallon Storage Tank for Gasoline Denaturant.

O. Tank T02, T04 - 150,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)
Tank T01, T03 - 80,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)
Tank T10 - 30,000 gallon gasoline denaturant Volatile Organic Liquid Storage Tank (2004)
Tank T11 - 489,000 gallon Volatile Organic Liquid Storage Tank (2012)
Tank T12 - 489,000 gallon Volatile Organic Liquid Storage Tank (2017)

P. Process F02 - Haul Roads, Scale

Q. Process F03, Stack S80, Control C80 - Truck Loading Rack 1
Process F06, Stack S80, Control C80 – Truck Loading Rack 2

R. Process F05 - Wet Cake Storage Building

**Insignificant Emissions Units.**

The following activities are performed at the facility. These activities are listed in s. NR 407.05(4)(c)9., Wis. Adm. Code as insignificant sources of air pollutants so they do not need to be included further in this analysis.

☒ Boiler, Turbine, and HVAC System Maintenance.
☒ Convenience Space Heating (< 5 million BTU/hr Burning Gas, Liquid, or Wood).
☒ Convenience Water Heating.
☒ Demineralization and Oxygen Scavenging of Water for Boilers.
☒ Fire Control Equipment.
☒ Fuel Oil Storage Tanks (< 10,000 gal.).
☒ Internal Combustion Engines Used for Warehousing and Material Transport.
☒ Janitorial Activities.
☒ Maintenance of Grounds, Equipment, and Buildings (lawn care, painting, etc.).
☒ Office Activities.
☒ Pollution Control Equipment Maintenance.
☒ Purging of Natural Gas Lines.
☒ Sanitary Sewer and Plumbing Venting.
☒ Corrosion Inhibitor Tank.

**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

**Title I Conditions.** The Wisconsin Department of Natural Resource issues Air Pollution Control Operation Permits for sources of air pollution, as required by chapter NR 407, Wis. Adm. Code, and Title V of the Clean Air Act (Act). In addition to

implementing the operation permit program, operation permits usually contain "Title I Conditions", i.e., conditions established under the permit programs for new and modified emission units, pursuant to chapters NR 405, 406, and 408, Wis. Adm. Code, and Title I of the Act. This operation permit contains Title I conditions that were established in previously issued permits. The specific conditions in this operation permit that were established under Title I of the Act are identified by citation to the Title I permit number. Conditions that originated as Title I conditions may only be revised through appropriate Title I actions. Conditions revised concurrently with a revision or renewal of an operation permit are identified by citation to the original Title I permit number and are appended with the last three digits of operation permit number.

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

**Limitations** - This column lists 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 also lists 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 column may be used to demonstrate compliance with the associated emission limit or work practice standard listed under the corresponding **Limitations** column. The compliance demonstration column contains limits on parameters or other mechanisms that must 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, are 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 are contained in this column and are the methods that must be used whenever testing is required. A reference test method is listed even if no testing is immediately required. Also included in this column are any recordkeeping requirements, 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.

**PART II** - This section contains general limitations and standard conditions that all permittees must abide by. These requirements are included in this section with every permit.

## Part I

| A. Process P60, Stack S60, Control C60 – Column Dryer | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed the more restrictive of:<br>(a) 0.20 pounds of particulate matter per 1,000 pounds of gas;<br>(b) the value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(m) and (2), Wis. Adm. Code; 16-JJW-075]<br><br>(2) $PM_{10}$ emissions from Stack S60 may not exceed 1.60 pounds per hour. [s. 285.65(3), Wis. Adm. Code, and s. NR 404.04(8), Wis. Adm. Code; 16-JJW-075]<br><br>(3) The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075] | (1) The permittee may only use natural gas, or another fuel approved by the Department in advance, in this dryer. [s. 285.65(3), Wis. Stats.; 16-JJW-075]<br><br>(2) The permittee shall maintain the records in I.A.1.c.(3) - (6) to demonstrate compliance with the limits in I.A.1.a. [s. 285.65(3), Wis. Stats.; 16-JJW-075] | (1) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever emission testing is required, the permittee shall use US EPA Method 5 for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(1), Wis. Adm. Code; 16-JJW-075]<br><br>(2) <u>Reference Test Method for $PM_{10}$ Emissions:</u> Whenever compliance emission testing is required, the permittee shall use US EPA Test Method 201A for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; 16-JJW-075]<br><br>(3) The permittee shall maintain records that show the fuels that the dryer is capable of combusting. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]<br><br>(4) The permittee shall maintain records of the calculation of the particulate matter and PM10 potential to emit, in pounds per hour, for this process. These records shall include the maximum hourly throughput, emission factors, source of the emission factors and any other information used in the calculation. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]<br><br>(5) The permittee shall keep and maintain documentation that the size of the column dryer plate perforations do not exceed 2.4 mm diameter (ca. 0.094 inch). [ss. NR 439.04(1)(d) and NR 440.47(3)(a)1., Wis. Adm. Code, 40 CFR 60.302(a)(1); 16-JJW-075]<br><br>(6) The permittee shall maintain records of all activities taken to prevent or reduce fugitive dust. These records shall include, at a minimum, a description of the activity and the date and time that each activity was taken. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] |

A. Process P60, Stack S60, Control C60 – Column Dryer

| 2. Pollutant: Visible Emissions | | |
|---|---|---|
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. The exceptions under s. NR 431.05, Wis. Adm. Code, do apply. [s. NR 431.05, Wis. Adm. Code; 16-JJW-075] | (1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075] | (1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Method 9, or another method approved by the Department. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075]<br><br>(2) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075] |

| **B.** Process P62, Stack S62, Control C62 – Dryer Silo #1 (North)<br>Process P63, Stack S63, Control C63 – Dryer Silo #2 (South) | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed the more restrictive of:<br>(a) 0.40 pounds of particulate matter per 1,000 pounds of gas;<br>(b) the value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(n) and (2), Wis. Adm. Code; 16-JJW-075]<br><br>(2) $PM_{10}$ emissions may not exceed 0.005 pounds per hour from each Stack S62 and S63. [s. 285.65(3), Wis. Stats. and ss. NR 404.04(8)(2) and NR 404.05(3), Wis. Adm. Code; 16-JJW-075] | (1) These storage silos shall be equipped with bin vent filter(s) to control particulate matter emissions at all times the silo is loading or unloading materials. [s. 285.65(3), Wis. Stats.; 16-JJW-075]<br><br>(2) The permittee shall perform periodic inspections of the bin vent filter(s) to ensure that the control equipment is operating properly. These inspections shall be performed at least once every six (6) months or other frequency as specified by the Department. [s. NR 406.10, Wis. Adm. Code; 16-JJW-075]<br><br>(3) Stack Parameters:[2] The following stack may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gases; and the stack shall have the following minimum stack height above ground level:<br>Stack — Height (ft)<br>S62 — 90.5<br>S63 — 90.5<br>[s. 285.65(3), Wis. Stats.; 16-JJW-075] | (1) Reference Test Method for Particulate Matter Emissions: Whenever emission testing is required, the permittee shall use US EPA Method 5 for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(1), Wis. Adm. Code; 16-JJW-075]<br><br>(2) Reference Test Method for $PM_{10}$ Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Test Method 201A for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; 16-JJW-075]<br><br>(3) Records shall be kept of all inspections and maintenance or repairs performed on the bin vent filter(s), and shall include the date of the action, a description of the action and the results. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]<br><br>(4) The permittee shall keep and maintain on-site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] |

| **B.** Process P62, Stack S62, Control C62 – Dryer Silo #1 (North)<br>Process P63, Stack S63, Control C63 – Dryer Silo #2 (South) | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075] | (1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075] | (1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Method 9, or another method approved by the Department. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075]<br><br>(2) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16- |

[2] These requirements are included because the source was reviewed with these stack parameters and it was determined that no NAAQS will be violated with these parameters.

| **B.** Process P62, Stack S62, Control C62 – Dryer Silo #1 (North)<br>Process P63, Stack S63, Control C63 – Dryer Silo #2 (South) | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | | JJW-075] |

| **C.** Process P64, Stack S64, Control C64 – Wet Grain Receiving Pit & Auger #3 | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed the more restrictive of:<br>(a) 0.40 pounds of particulate matter per 1,000 pounds of gas;<br>(b) The value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(n) and (2), Wis. Adm. Code; 16-JJW-075]<br><br>(2) $PM_{10}$ emissions may not exceed 0.02 pounds per hour from Stack S64. [s. 285.65(3), Wis. Stats. and ss. NR 404.04(8)(2) and NR 404.05(3), Wis. Adm. Code; 16-JJW-075]<br><br>(3) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any process emission which contain particulate matter in excess of 0.023 g/dscm (ca. 0.01 gr/dscf). [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(b)(1), s. NR 440.47(3)(b)1., Wis. Adm. Code; 16-JJW-075] | (1) The permittee shall use a baghouse to control particulate matter emissions from this process whenever it is operating. [s. 285.65(3), Wis. Stats.; 16-JJW-075]<br><br>(2) The permittee shall install, calibrate, maintain and operate devices for measuring the pressure drop across the baghouse used to control emissions from this process. [s. NR 439.055(1)(a), Wis. Adm. Code; 16-JJW-075]<br><br>(3) The permittee shall maintain the pressure drop across the baghouse within 1 to 8 inches of water column. An alternate range may be approved by the Department using the procedures under ch. NR 407, Wis. Adm. Code. [s. 285.65(3), Wis. Stats. and s. NR 439.055(1)(b), Wis. Adm. Code; 16-JJW-075]<br><br>(4) The permittee shall perform a periodic inspections of the baghouse to ensure that the control equipment is operating properly. This inspection shall be performed at least once every six (6) months or other frequency as specified by the Department. [s. NR 406.10, Wis. Adm. Code; 16-JJW-075]<br><br>(5) Stack Parameters:[3] The following stack may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gases; and the stack shall have the following minimum stack height above ground level:<br>Stack Height (ft)<br>S64 10<br>[s. 285.65(3), Wis. Stats.; 16-JJW-075] | (1) Reference Test Method for Particulate Matter Emissions: Whenever emission testing is required, the permittee shall use US EPA Method 5 for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(1), Wis. Adm. Code; 16-JJW-075]<br><br>(2) Reference Test Method for $PM_{10}$ Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Test Method 201A for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; 16-JJW-075]<br><br>(3) To demonstrate compliance with the emission limitation under I.C.1.a.(3), Method 5 shall be used to determine the particulate matter concentration and the volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 1.70 dscm (60 dscf). The probe and filter holder shall be operated without heaters. Method 2 shall be used to determine the ventilation volumetric flow rate. [s. 285.65(13), Wis. Stats. and 40 CFR 60.303(b)(1)(&(2), s. NR 440.47(4)(b)1.&2., Wis. Adm. Code; 16-JJW-075]<br><br>(4) The permittee shall measure and record the pressure drop across each baghouse once for every 8 hours of source operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 16-JJW-075]<br><br>(5) Records shall be kept of all inspections and maintenance or repairs performed on the control devices, and shall include the date of the action, a description of the action and the results. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]<br><br>(6) The permittee shall keep and maintain on-site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] |

[3] These requirements are included because the source was reviewed with these stack parameters and it was determined that no NAAQS will be violated with these parameters.

| **C.** Process P64, Stack S64, Control C64 – Wet Grain Receiving Pit & Auger #3 | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075]<br><br>(2) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any process emission which exhibits greater than 0 percent opacity. [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(b)(2), s. NR 440.47(3)(b)2., Wis. Adm. Code; 16-JJW-075] | (1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075] | (1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Method 9, or another method approved by the Department. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075]<br><br>(2) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075] |

| **D.** Fugitive F10 – Wet Grain Receiving Pit & Auger #3<br>Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures) | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Minimization of fugitive dust emissions: No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075] | (1) The grain receiving area(s) shall be enclosed. [s. 285.65(7), Wis. Stats.; s. NR 406.10, Wis. Adm. Code; 16-JJW-075]<br><br>(2) The permittee shall clean and sweep the corn / grain receiving areas daily to prevent fugitive dust emissions. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075]<br><br>(3) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075]<br><br>(4) The facility shall prepare, maintain and follow a fugitive dust plan for control of fugitive dust emissions from the haul roads, grain handling and other areas. The Department may request amendments to the plan. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075]<br><br>(5) The permittee shall take precautions to prevent particulate matter from becoming airborne.<br>(a) Such precautions shall include, but not be limited to:<br>(i) Use, where possible, of water or chemicals for control of dust in construction operations.<br>(ii) Application of asphalt, water, suitable chemicals or plastic covering on dirt roads, material stockpiles and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor or water pollution problem.<br>(iii) Installation and use of hoods, fans and air cleaning devices to enclose and vent the areas where dusty materials are handled. | (1) <u>Reference Test Method for Visible (Fugitive Dust) emissions:</u> Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 16-JJW-075]<br><br>(2) The grain receiving areas shall be enclosed. This shall be documented by the actual physical structures and by prints and other documentation. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]<br><br>(3) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075]<br><br>(4) The facility shall maintain daily records of cleaning / sweeping activities. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] |

| **D.** Fugitive F10 – Wet Grain Receiving Pit & Auger #3<br>Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures) | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | (iv) Covering or securing of materials likely to become airborne while being moved on public roads or railroads.<br>(v) The paving or maintenance of roadway areas so as not to create air pollution.<br>[s. NR 415.04, Wis. Adm. Code; 16-JJW-075] | |

| **D.** Fugitive F10 – Wet Grain Receiving Pit & Auger #3<br>Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures) | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075]<br><br>(2) No owner or operator shall cause to be discharged into the atmosphere any fugitive emission from any fugitive emission from any grain handling operation which exhibits greater than 0 percent opacity. [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(c)(2), s. NR 440.47(3)(c)2., Wis. Adm. Code; 16-JJW-075]<br><br>(3) No owner or operator shall cause to be discharged into the atmosphere any fugitive emission from any fugitive emission from any individual truck unloading station which exhibits greater than 5 percent opacity. [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(c)(1), s. NR 440.47(3)(c)1., Wis. Adm. Code; 16-JJW-075]<br><br>(4) No owner or operator shall cause to be discharged into the atmosphere any fugitive emission from any fugitive emission from any truck loading station which exhibits greater than 10 percent opacity. [s. 285.65(13), Wis. Stats. and 40 | (1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075] | (1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; s. 285.65(13), Wis. Stats and 40 CFR 60.303(b)(3), s. NR 440.47(4)(b)3., Wis. Adm. Code; 16-JJW-075]<br><br>(2) Reference Test Method for Visible (Fugitive Dust) emissions: Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 16-JJW-075]<br><br>(3) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075] |

| **D.** Fugitive F10 – Wet Grain Receiving Pit & Auger #3<br>Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures) | | |
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| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| CFR 60.302(c)(3), s. NR 440.47(3)(c)3., Wis. Adm. Code; 16-JJW-075] | | |

| E. Process P21, P22, P23, P24, P24B, P25, P26, Stack S20, Control C20 - Elevators (#1 - 15,000 Bu/hr, #2 - 54,771 Bu/day), Screening bin, Storage bins (#1, #2 - 100,000 Btu each; #3 - 200,000 Bu), Hammermills (#1, #2) | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 0.3 pound per hour.[4] (TSP and $PM_{10}$). [s. NR 404.08(2), Wis. Adm. Code; 06-JJW-281]<br><br>(2) Emissions may not exceed the more restrictive of:<br>(a) 0.40 pounds of particulate matter per 1,000 pounds of gas;<br>(b) the value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(n) and (2)]<br><br>(3) See stack parameters in I.ZZZ.7. [s. 285.65(3), Stats.] | (1) Whenever any portion of the corn receiving / handling / storage / milling process is in operation, the permittee shall vent the exhaust to an operating fabric filter baghouse. [s. NR 406.10, Wis. Adm. Code; 06-JJW-281]<br><br>(2) The operating pressure drop across the baghouse shall be maintained between 1.0 to 10.0 inches of water column gauge pressure. [s. NR 407.09(1)(c), Wis. Adm. Code; 06-JJW-281]<br><br>(3) The grain receiving areas shall be enclosed. The collected exhaust from the P21-P26 area shall be vented to an operating fabric filter baghouse whenever loading or unloading is occurring. [s. 285.65(7), Wis. Stats.; s. NR 406.10, Wis. Adm. Code; 06-JJW-281]<br><br>(4) The permittee shall clean and sweep the corn / grain receiving areas and roads as needed to prevent fugitive dust emissions. [s. NR 415.04, Wis. Adm. Code; 06-JJW-281]<br><br>(5) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 06-JJW-281]<br><br>(6) Same as I.G.1.b.(2). [s. NR 415.04, Wis. Adm. Code]<br><br>(7) The permittee shall perform periodic internal inspections of the baghouse to ensure that the control equipment is operating properly. This time interval between inspections may not exceed twelve (12) months. These inspections shall include, but not be limited to inspections and maintenance/repair (as necessary) of:<br>(a) Valves, hatches, dampers, and gaskets for signs of air infiltration; and<br>(b) Bag condition, tension, and signs of clean side deposits. [s. NR 407.09(4)a)1., Wis. Adm. Code; 06-JJW-281] | (1) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5 including backhalf (US EPA Method 202). [s. NR 439.06(1), Wis. Adm. Code; 06-JJW-281]<br><br>(2) The permittee shall monitor and record the pressure drop at least once for every eight hours of operation or once per day of operation, whichever yields the greatest number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 06-JJW-281]<br><br>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the baghouse, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code; 06-JJW-281]<br><br>(4) Same as I.G.1.c.(4). [s. NR 439.04, Wis. Adm. Code]<br><br>(5) The semiannual monitoring report required by Condition I.ZZZ.5.a.(1) shall include the following:<br>(a) Summary of information on the number, duration and cause (including unknown cause, if applicable) of excursions, and the corrective actions taken,<br>(b) Summary of information on the number. Duration and cause (including unknown cause, if applicable) for monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks), if applicable; and,<br>(c) A description of the actions, if any, taken to implement a QIP during the reporting period as specified in 40 CFR s. 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the |

[4] This emission limit is to avoid any exceedance of an ambient air standard or increment. The emission limit is more restrictive than that in s. NR 415.05, Wis. Adm. Code.

| E. Process P21, P22, P23, P24, P24B, P25, P26, Stack S20, Control C20 - Elevators (#1 - 15,000 Bu/hr, #2 - 54,771 Bu/day), Screening bin, Storage bins (#1, #2 - 100,000 Btu each; #3 - 200,000 Bu), Hammermills (#1, #2) | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | (8) Compliance Assurance Monitoring (CAM):<br>(a) Whenever Process P22, P25, or P26 are operating, the permittee shall monitoring the pressure drop across Control Device C20 as an indicator of performance as required in I.E.1.c.(2).<br>(b) The indicator range for pressure drop across Control Device C20 is as required in I.E.1.b.(2).<br>(c) An excursion is any pressure drop reading outside of the indicator range while process P22, P25, or P26 are operating.<br>(d) The quality threshold improvement plant (QIP) threshold is twenty eight excursions in a six-month period.<br>(e) The permittee shall operate the pressure drop monitoring in accordance with 40 CFR ss. 64.7 and 64.8 as detailed in Conditions I.ZZZ.6.a.(1) and (2).<br>[s. NR 407.09(4)(a)(1)., Wis. Adm. Code, 40 CFR ss. 64.3(a), 64.6(c), 64.7, 64.8] | implementation of the plan has been completed and reduced the likelihood of similar levels of excursions occurring.<br>[s. 285.65(13), Wis. Stats., 40 CFR ss. 64.6(c)(3), 64.9(b)]<br><br>(6) The permittee shall keep the records outlined in I.ZZZ.6.a.(3). [s. 285.65(13), Wis. Stats.; 40 CFR s. 64.6(c)(3), 64.9(b)] |

| E. Process P21, P22, P23, P24, P24B, P25, P26, Stack S20, Control C20 - Elevators (#1 - 15,000 Bu/hr, #2 - 54,771 Bu/day), Screening bin, Storage bins (#1, #2 - 100,000 Btu each; #3 - 200,000 Bu), Hammermills (#1, #2) | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 06-JJW-281] | (1) The requirements in I.E.1.b.(1) and I.E.1.b.(3) shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 06-JJW-281] | (1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 06-JJW-281]<br><br>(2) The recordkeeping requirements in I.E.1.c shall be used for monitoring the compliance demonstration. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281] |

| F. Process P20, Stack S21, Control C21 - Corn Dump Pit / Auger #2 | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Not more than 0.2 pounds per hour from S21[5]. [s. NR 404.08(2), Wis. Adm. Code; 04-DCF-295]<br><br>(2) Emissions may not exceed the more restrictive of:<br>(a) 0.40 pounds of particulate matter per 1,000 pounds of gas;<br>(b) The value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(n) and (2)]<br><br>(3) See stack parameters in I.ZZZ.7. [s. 285.65(3), Stats.] | (1) Whenever any portion of the corn receiving process is in operation, the permittee shall vent the exhaust to an operating fabric filter baghouse. [s. NR 406.10, Wis. Adm. Code; 04-DCF-295]<br><br>(2) The operating pressure drop across the baghouse shall be maintained between 1.0 to 8.0 inches of water column gauge pressure. [s. NR 407.09(1)(c), Wis. Adm. Code; 04-DCF-295]<br><br>(3) The grain receiving area shall be enclosed. The collected exhaust from the P20 / S21- area shall be vented to an operating fabric filter baghouse whenever loading or unloading is occurring. [s. 285.65(7), Wis. Stats.; s. NR 406.10, Wis. Adm. Code; 04-DCF-295]<br><br>(4) The permittee shall clean and sweep the corn / grain receiving areas and roads as needed to prevent fugitive dust emissions. [s. NR 415.04, Wis. Adm. Code; 04-DCF-295]<br><br>(5) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 04-DCF-295]<br><br>(6) Same as I.G.1.b.(2). [s. NR 415.04, Wis. Adm. Code]<br><br>(7) The permittee shall perform periodic internal inspections of the baghouse to ensure that the control equipment is operating properly. This time interval between inspections may not exceed twelve (12) months. These inspections shall include, but not be limited to inspections and maintenance/repair (as necessary) of:<br>(a) Valves, hatches, dampers, and gaskets for signs of air infiltration; and<br>(b) Bag condition, tension, and signs of clean side deposits. [s. NR 407.09(4)a)1., Wis. Adm. Code; 04-DCF-295]<br><br>(8) <u>Compliance Assurance Monitoring (CAM):</u> | (1) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5 including backhalf (US EPA Method 202). [s. NR 439.06(1), Wis. Adm. Code; 04-DCF-295]<br><br>(2) The permittee shall monitor and record the pressure drop at least once for every eight hours of operation or once per day of operation, whichever yields the greatest number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 04-DCF-295]<br><br>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the baghouse, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code; 04-DCF-295]<br><br>(4) Same as I.G.1.c.(4). [s. NR 439.04, Wis. Adm. Code]<br><br>(5) The semiannual monitoring report required by Condition I.ZZZ.5.a.(1) shall include the following:<br>(a) Summary of information on the number, duration and cause (including unknown cause, if applicable) of excursions, and the corrective actions taken,<br>(b) Summary of information on the number. Duration and cause (including unknown cause, if applicable) for monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks), if applicable; and,<br>(c) A description of the actions, if any, taken to implement a QIP during the reporting period as specified in 40 CFR s. 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and |

[5] This emission limit is to avoid any exceedance of an ambient air standard or increment. The emission limit is more restrictive than that in s. NR 415.05, Wis. Adm. Code.

| F. Process P20, Stack S21, Control C21 - Corn Dump Pit / Auger #2 | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | (a) Whenever Process P20 is operating, the permittee shall monitoring the pressure drop across Control Device C21 as an indicator of performance as required in I.F.1.c.(2).<br>(b) The indicator range for pressure drop across Control Device C20 is as required in I.F.1.b.(2).<br>(c) An excursion is any pressure drop reading outside of the indicator range while process P20 is operating.<br>(d) The quality threshold improvement plant (QIP) threshold is twenty eight excursions in a six-month period.<br>(e) the permittee shall operate the pressure drop monitoring in accordance with 40 CFR ss. 64.7 and 64.8 as detailed in Conditions I.ZZZ.6.a.(1) and (2).<br>[s. NR 407.09(4)(a)(1., Wis. Adm. Code, 40 CFR ss. 64.3(a), 64.6(c), 64.7, 64.8] | reduced the likelihood of similar levels of excursions occurring.<br>[s. 285.65(13), Wis. Stats., 40 CFR ss. 64.6(c)(3), 64.9(b)]<br><br>(6) The permittee shall keep the records outlined in I.ZZZ.6.a.(3). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 64.6(c)(3), 64.9(b)] |

| F. Process P20, Stack S21, Control C21 - Corn Dump Pit / Auger #2 | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 04-DCF-295] | (1) The requirements in I.F.1.b.(2) and I.F.1.b.(3) shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 04-DCF-295] | (1) <u>Reference Test Method for Visible Emissions:</u> Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 04-DCF-295]<br><br>(2) The recordkeeping requirements in I.F.1.c shall be used for monitoring the compliance demonstration. [s. NR 439.04, Wis. Adm. Code; 04-DCF-295] |

| G. Process P18, P10, Stack F10 - Corn Dump Pit / Auger #1, #2, Corn Storage Building, Elevators, Other Misc. Grain Handling Fugitive Emissions | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Minimization of fugitive dust emissions: No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code; 06-JJW-281] | (1) The grain receiving area(s) shall be enclosed. [s. 285.65(7), Wis. Stats.; s. NR 406.10, Wis. Adm. Code; 06-JJW-281]<br><br>(2) The permittee shall clean and sweep the corn / grain receiving areas daily to prevent fugitive dust emissions. [s. NR 415.04, Wis. Adm. Code; 06-JJW-281]<br><br>(3) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 06-JJW-281]<br><br>(4) The facility shall prepare, maintain and follow a fugitive dust plan for control of fugitive dust emissions from the haul roads, grain handling and other areas. The Department may request amendments to the plan. [s. NR 415.04, Wis. Adm. Code; 06-JJW-281]<br><br>(5) The permittee shall take precautions to prevent particulate matter from becoming airborne.<br>(a) Such precautions shall include, but not be limited to:<br>(i) Use, where possible, of water or chemicals for control of dust in construction operations.<br>(ii) Application of asphalt, water, suitable chemicals or plastic covering on dirt roads, material stockpiles and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor or water pollution problem.<br>(iii) Installation and use of hoods, fans and air cleaning devices to enclose and vent the areas where dusty materials are handled.<br>(iv) Covering or securing of materials likely to become airborne while being moved on public roads or railroads.<br>(v) The paving or maintenance of roadway areas so as not to create air pollution.<br>[s. NR 415.04, Wis. Adm. Code; 06-JJW-281] | (1) Reference Test Method for Visible (Fugitive Dust) emissions: Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 06-JJW-281]<br><br>(2) The grain receiving areas shall be enclosed. This shall be documented by the actual physical structures and by prints and other documentation. [s. 285.65(7), Wis. Stats.; s. NR 406.10, Wis. Adm. Code; 06-JJW-281]<br><br>(3) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 06-JJW-281]<br><br>(4) The facility shall maintain daily records of cleaning / sweeping activities. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281] |

| G. Process P18, P10, Stack F10 - Corn Dump Pit / Auger #1, #2, Corn Storage Building, Elevators, Other Misc. Grain Handling Fugitive Emissions | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed 20% opacity. [s. NR | (1) The requirements in 1.G.1.b. shall be used to | (1) Reference Test Method for Visible Emissions: Whenever |

| **G.** Process P18, P10, Stack F10 - Corn Dump Pit / Auger #1, #2, Corn Storage Building, Elevators, Other Misc. Grain Handling Fugitive Emissions | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| 431.05(1), Wis. Adm. Code; 06-JJW-281] | show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 06-JJW-281] | visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 06-JJW-281]<br><br>(2) <u>Reference Test Method for Visible (Fugitive Dust) emissions:</u> Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 06-JJW-281]<br><br>(3) The recordkeeping requirements in I.G.1.c shall be used for monitoring the compliance demonstration. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281] |

| **H.** Process P30, Stack S31A, S33A, S35A, S36A - Cooling Towers (4)<br>Process P95, Stack S95 - Cooling Tower (1) | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 0.197 pounds per hour PM / $PM_{10}$ from each cooling tower stack, except for S95. (1.58 lbs/hr aggregate).[6] [ss. NR 404.08(2), and NR 406.04(1q), Wis. Adm. Code; 06-JJW-281; 14-JJW-037-EXM; 16-JJW-075]<br><br>(2) 0.06 pound per hour PM / $PM_{10}$ from cooling tower stack S95.[7] [s. NR 404.08(2), Wis. Adm. Code; 06-JJW-281]<br><br>(3) Chromium compounds may not be added to the cooling water. [s. NR 406.10, Wis. Adm. Code; 06-JJW-281; 16-JJW-075]<br><br>(4) Emissions may not exceed the more restrictive of:<br>(a) 0.40 pounds of particulate matter per 1,000 pounds of gas;<br>(b) The value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(o) and (2), Wis. Adm. Code; 16-JJW-075]<br><br>(5) See stack parameters in I.ZZZ.7. [s. 285.65(3), Stats.] | (1) The Total Dissolved Solids (TDS) or Total Solids (TS) concentration in the cooling water may not exceed 3,500 parts per million (ppmw), or 3,500 mg/l. The following information is the basis of the calculated potential to emit:[8]<br>(a) Stack S31A - 4,000 gallon per minute design capacity and the design 0.001% max. circulation drift rate;<br>(b) Stack S33A - 4,000 gallon per minute design capacity and the design 0.001% max. circulation drift rate;<br>(c) Stack S35A - 7,250 gallon per minute design capacity and the design 0.001% max. circulation drift rate;<br>(d) Stack S36A - 7,250 gallon per minute design capacity and the design 0.001% max. circulation drift rate; and<br>(e) Stack S95- 1,650 gallon per minute design capacity and the design 0.002% max. circulation drift rate.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059] | (1) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5 (including condensable particulate by US EPA Method 202). [s. NR 439.06(1), Wis. Adm. Code; 06-JJW-281; 16-JJW-075]<br><br>(2) The permittee shall determine and record the concentration of Total Dissolved Solids (TDS) or Total Solids (TS) in the cooling water on a monthly basis or at the frequency required under any WPDES permit if either of these values are required to be measured and recorded under the WPDES permit (but not less than monthly). [s. NR 439.04, Wis. Adm. Code; 06-JJW-281; 16-JJW-075]<br><br>(3) The facility shall keep and maintain documentation of the manufacture's design circulation flow rate and circulation drift rate specification for the cooling towers installed at the facility. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281; 16-JJW-075]<br><br>(4) The permittee shall maintain a description of the type of water treatment program used in the industrial process cooling tower(s), including the chemical name of each corrosion inhibitor / biocide ingredient used; the average concentration of those corrosion inhibitor / biocide ingredients maintained in the cooling water; and a copy of the material safety data sheet for each water treatment chemical or chemical compound used in the industrial process cooling tower. [ss. NR 439.04 and NR 468.30(4)(a), Wis. Adm. Code, 40 CFR 63.405(a); 06-JJW-281; 16-JJW-075] |

[6] The particulate matter emissions limitation of 0.197 pounds per hour (from each cooling tower) is more restrictive than the applicable limitation of s. NR 415.05, Wis. Adm. Code. This is necessary to prevent a violation of an ambient air quality standard and/or increment. For Processes P31A and P33A, the particulate emission limitation also serves to demonstrate compliance with the exemption threshold under s. NR 406.04(1q), Wis. Adm. Code.

[7] The particulate matter emissions limitation of 0.06 pounds per hour is more restrictive than the applicable limitation of s. NR 415.05, Wis. Adm. Code. This is necessary to prevent a violation of an ambient air quality standard and/or increment.

[8] This requirement implies that compliance is demonstrated if either the TDS <u>or</u> TS values are not in excess of 3,500 ppmw or mg/l. The facility may elect to measure and-record the values of either TDS or TS.

| **H.** Process P30, Stack S31A, S33A, S35A, S36A - Cooling Towers (4)<br>Process P95, Stack S95 - Cooling Tower (1) | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 06-JJW-281; 16-JJW-075] | (1) The requirements in I.H.1.b. shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 06-JJW-281; 16-JJW-075] | (1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 06-JJW-281; 16-JJW-075]<br><br>(2) The recordkeeping requirements in I.H.1.c shall be used for monitoring the compliance demonstration. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281; 16-JJW-075] |

| I. Stack S40, Control C40, C40B - $CO_2$ Scrubbers (2), Process P57 - Ethanol Recovery Unit Condenser, Fermentation and Related Processes: Process P43 - Beerwell (424000 gallons); Process P44A-K - Fermenter #1 - #11 (366,600 gallon each); Process P41 - Yeast Tank #1 (180,000 gal.); Process P42 - Yeast Tank #2 (30,000 gal.) | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 85% overall control of VOC emissions from this process line. [s. NR 424.03(2)(c), Wis. Adm. Code; 17-JJW-059]<br><br>(2) VOC emission from Stack S40 may not exceed 3.52 pounds per hour. [s. 285.65(3) & (7), Wis. Stats.; 17-JJW-059]<br><br>(3) Total 200 proof ethanol production from these processes may not exceed 6.0 million gallons per calendar month averaged over each consecutive 12 calendar month period. [s. 285.65(7), Wis. Stats., Wis. Adm. Code; 17-JJW-059] | (1) Except as provided below, whenever ethanol is produced at the facility, the permittee shall direct the fermentation process exhaust to wet scrubber(s). During periods of limited production, defined as any 24 hour period of continuous plant operations with an ethanol yield of less than 80,000 gallons, the facility may route fermentation process exhaust through either scrubber. [s. NR 406.10, Wis. Adm. Code and s. 285.65(3), Wis. Stats.; 17-JJW-059]<br><br>(2) The permittee shall operate, maintain and calibrate monitoring devices for measuring the liquid flow rate for each wet scrubber used to control emissions from these process lines. [s. NR 439.055(1)(a), Wis. Adm. Code; 17-JJW-059]<br><br>(3) Each wet scrubber shall have a water flow rate through the scrubber of at least 20 gpm or an alternate range approved by the Department in writing using the procedures under ch. NR 407, Wis. Adm. Code. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 17-JJW-059]<br><br>(4) The permittee shall perform annual operational and internal inspections of each scrubber to ensure that the equipment is operating properly. The time interval between inspections may not exceed twelve (12) months. The inspections shall include, but are not be limited to, the following items:<br>(a) The scrubber bottoms pump; and<br>(b) The packing and demister.<br>[s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 17-JJW-059]<br><br>(5) Within 180 days prior to the expiration date of the operation permit, the permittee shall perform a compliance test of Stack S40 to demonstrate compliance with the limitations in I.I.1.a.(1)&(2). | (1) <u>Reference Test Method for Volatile Organic Compound (VOC) Emissions:</u> Whenever VOC compliance testing is required, USEPA Method 18 or 25A, or another method approved by the Department in writing shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code; 17-JJW-059]<br><br>(2) The facility shall monitor and record the flow rate of water to each scrubber at least once every 8 hours or once per day, whichever yields the greatest number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 17-JJW-059-P20]<br><br>(3) The permittee shall keep and maintain records of each scrubber inspection, including:<br>(a) The date and name of the person(s) or the organization performing the scrubber inspections;<br>(b) A list of the items inspected; and<br>(c) Any maintenance or repairs performed as a result of these inspections and the findings of any inspection.<br>[s. 285.65(10), Wis. Stats. and s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059]<br><br>(4) The permittee shall keep and maintain the following records:<br>(a) The start and end times and calendar dates of all 24 hour periods in which the facility routed fermentation process exhaust through a single scrubber;<br>(b) The ethanol yield, in gallons, for any 24 hour period in which the facility routed fermentation process exhaust through a single scrubber;<br>(c) the total amount of 200 proof ethanol produced by this facility in million gallons for each calendar month;<br>(d) The total amount of 200 proof ethanol produced by this facility in million gallons per month averaged over each consecutive 12 calendar month period; and<br>(e) Records of all compliance testing.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059] |

| I. Stack S40, Control C40, C40B - $CO_2$ Scrubbers (2), Process P57 - Ethanol Recovery Unit Condenser, Fermentation and Related Processes: Process P43 - Beerwell (424000 gallons); Process P44A-K - Fermenter #1 - #11 (366,600 gallon each); Process P41 - Yeast Tank #1 (180,000 gal.); Process P42 - Yeast Tank #2 (30,000 gal.) | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | [s. 285.65(3), Wis. Stats. and ss. NR 439.06 and NR 439.075(b), Wis. Adm. Code; 17-JJW-059] | |

| I. Stack S40, Control C40, C40B - $CO_2$ Scrubbers (2), Process P57 - Ethanol Recovery Unit Condenser, Fermentation and Related Processes: Process P43 - Beerwell (424000 gallons); Process P44A-K - Fermenter #1 - #11 (366,600 gallon each); Process P41 - Yeast Tank #1 (180,000 gal.); Process P42 - Yeast Tank #2 (30,000 gal.) | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions of shade or density may not be greater than number 1 of the Ringlemann chart or 20% opacity.. [s. NR 431.05, Wis. Adm. Code; 17-JJW-059] | (1) The requirements in 1.I.1.b.(1)-(3) shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Adm. Code and s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 17-JJW-059] | (1) <u>Reference Test Method for Visible Emissions:</u> Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 17-JJW-059]<br><br>(2) The recordkeeping requirements in I.I.1.c.(2)-(3) shall be used for monitoring the compliance demonstration. [s. 285.65(3), Wis. Stats. and s. NR 407.09(1)(c)1.b., Wis. Adm. Code; 17-JJW-059] |

| I. Stack S40, Control C40, C40B - $CO_2$ Scrubbers (2), Process P57 - Ethanol Recovery Unit Condenser, Fermentation and Related Processes: Process P43 - Beerwell (424000 gallons); Process P44A-K - Fermenter #1 - #11 (366,600 gallon each); Process P41 - Yeast Tank #1 (180,000 gal.); Process P42 - Yeast Tank #2 (30,000 gal.) | | |
|---|---|---|
| 3. Pollutant: Malodorous Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) General Limitations. No person may allow or permit emissions into the ambient air any substance or combination of substances in such quantities that an objectionable odor is determined to result unless preventative measures satisfactory to the Department are taken to abate or control such emission. [s. NR 429.03(1), Wis. Adm. Code; 17-JJW-059]* | (1) The permittee shall prepare and implement an Odor Prevention and Abatement Plan. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]*<br><br>(2) The Odor Prevention and Abatement Plan shall include a process to document and investigate complaints related to malodorous emissions. The permittee shall investigate each complaint related to malodorous emissions as expeditiously as practicable. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]*<br><br>(3) If malodorous emissions are determined to exist or persist as a result of process operations, the facility shall propose additional means of odor control by amending the Odor Prevention and | (1) The facility shall keep and maintain the following records:<br>(a) A record of all complaints related to malodorous emissions. The record shall include the date, time, and name of the complainant.<br>(b) A record of the results of each investigation related to a malodorous emissions complaint.<br>(c) The most recent version of the Odor Prevention and Abatement Plan.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059]* |

| **I.** Stack S40, Control C40, C40B - $CO_2$ Scrubbers (2), Process P57 - Ethanol Recovery Unit Condenser, Fermentation and Related Processes: Process P43 - Beerwell (424000 gallons); Process P44A-K - Fermenter #1 - #11 (366,600 gallon each); Process P41 - Yeast Tank #1 (180,000 gal.); Process P42 - Yeast Tank #2 (30,000 gal.) | | |
|---|---|---|
| 3. Pollutant: Malodorous Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | Abatement Plan and proposing the actions or controls needed to minimize the odors. The facility shall implement the additional measures to reduce odors as expeditiously as practicable. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]* | |

| **J.** Stack S50; Control C50; Distillation and Related Processes: Process P50 - Molecular Sieve; Process P51 - Evaporator; Process P52 - Rectifier; Process P53 - Side Stripper; Process P65 – Liquefaction Tank (45,000 gal.); Process P70 - Modular Ethanol Dehydration System; Process P54 and Process P71 - Slurry Tank; Process P55 - Beer Stripper; Process P56 - De-Gas vessel; Process P50B - Molecular Sieve; Process P51B - Evaporator; Process P52B - Rectifier; Process P53B - Side Stripper; Process P54B - Slurry Tank; Process P55B - Beer Stripper; Process P56B - De-Gas Vessel. | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 85% overall control of VOC emissions from this process line. [s. NR 424.03(2)(c), Wis. Adm. Code; 17-JJW-059]<br><br>(2) VOC emission from Stack S50 may not exceed 1.95 pounds per hour. [s. 285.65(3) & (7), Wis. Stats.; 17-JJW-059]<br><br>(3) Total 200 proof ethanol production from these processes may not exceed 6.0 million gallons per calendar month averaged over each consecutive 12 calendar month period. [s. 285.65(7), Wis. Stats., Wis. Adm. Code; 17-JJW-059] | (1) Whenever ethanol is produced at the facility, the permittee shall direct the distillation process to an operating wet scrubber. [s. NR 406.10, Wis. Adm. Code and s. 285.65(3), Wis. Stats.; 17-JJW-059]<br><br>(2) Each wet scrubber shall have a water flow rate through the scrubber of at least 4.0 gpm or an alternate range approved by the Department in writing using the procedures under ch. NR 407, Wis. Adm. Code. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 17-JJW-059]<br><br>(3) The permittee shall perform annual operational and internal inspections of each scrubber to ensure that the equipment is operating properly. The time interval between inspections may not exceed twelve (12) months. The inspections shall include, but are not be limited to the following items:<br>(a) The scrubber bottoms pump; and<br>(b) The packing and demister.<br>[s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 17-JJW-059]<br><br>(4) Within 180 days prior to the expiration date of the operation permit, the permittee shall perform a compliance test of Stack S40 to demonstrate compliance with the limitations in I.J.1.a.(1)&(2). [s. 285.65(3), Wis. Stats. and ss. NR 439.06 and NR 439.075(b), Wis. Adm. Code; 17-JJW-059] | (1) <u>Reference Test Method for Volatile Organic Compound (VOC) Emissions:</u> Whenever VOC compliance testing is required, USEPA Method 18 or 25A, or another method approved by the Department in writing shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code; 17-JJW-059]<br><br>(2) The facility shall monitor and record the flow rate of water to the scrubber at least once every 8 hours or once per day, whichever yields the greatest number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 17-JJW-059-P20]<br><br>(3) The permittee shall keep and maintain records of each scrubber inspection, including:<br>(a) The date and name of the person(s) or organization performing the scrubber inspections;<br>(b) A list of the items inspected; and<br>(c) Any maintenance or repairs performed as a result of these inspections.<br>[s. 285.65(10), Wis. Stats. and s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059]<br><br>(4) The facility shall keep and maintain the following records:<br>(a) The total amount of 200 proof ethanol produced by this facility in million gallons for each calendar month; and<br>(b) The total amount of 200 proof ethanol produced by this facility in million gallons per month averaged over each consecutive 12 calendar month period;<br>(c) Records of all compliance testing.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059] |

| **J.** Stack S50; Control C50; Distillation and Related Processes: Process P50 - Molecular Sieve; Process P51 - Evaporator; Process P52 - Rectifier; Process P53 - Side Stripper; Process P65 – Liquefaction Tank (45,000 gal.); Process P70 - Modular Ethanol Dehydration System; Process P54 and Process P71 - Slurry Tank; Process P55 - Beer Stripper; Process P56 - De-Gas vessel; Process P50B - Molecular Sieve; Process P51B - Evaporator; Process P52B - Rectifier; Process P53B - Side Stripper; Process P54B - Slurry Tank; Process P55B - Beer Stripper; Process P56B - De-Gas Vessel. | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions of shade or density may not be greater than number 1 of the Ringlemann chart or 20% opacity.. [s. NR 431.05, Wis. Adm. Code; 17-JJW-059] | (1) The requirements in 1.J.1.b.(1)-(3) shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Adm. Code and s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 17-JJW-059] | (1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 17-JJW-059]<br><br>(2) The recordkeeping requirements in I.J.1.c.(2)-(3) shall be used for monitoring the compliance demonstration. [s. 285.65(3), Wis. Stats. and s. NR 407.09(1)(c)1.b., Wis. Adm. Code; 17-JJW-059] |

| **J.** Stack S50; Control C50; Distillation and Related Processes: Process P50 - Molecular Sieve; Process P51 - Evaporator; Process P52 - Rectifier; Process P53 - Side Stripper; Process P65 – Liquefaction Tank (45,000 gal.); Process P70 - Modular Ethanol Dehydration System; Process P54 and Process P71 - Slurry Tank; Process P55 - Beer Stripper; Process P56 - De-Gas vessel; Process P50B - Molecular Sieve; Process P51B - Evaporator; Process P52B - Rectifier; Process P53B - Side Stripper; Process P54B - Slurry Tank; Process P55B - Beer Stripper; Process P56B - De-Gas Vessel. | | |
|---|---|---|
| 3. Pollutant: Malodorous Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) General Limitations. No person may allow or permit emissions into the ambient air any substance or combination of substances in such quantities that an objectionable odor is determined to result unless preventative measures satisfactory to the Department are taken to abate or control such emission. [s. NR 429.03(1), Wis. Adm. Code; 17-JJW-059]* | (1) The permittee shall prepare and implement an Odor Prevention and Abatement Plan. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]*<br><br>(2) The Odor Prevention and Abatement Plan shall include a process to document and investigate complaints related to malodorous emissions. The permittee shall investigate each complaint related to malodorous emissions as expeditiously as practicable. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]*<br><br>(3) If malodorous emissions are determined to exist or persist as a result of process operations, the facility shall propose additional means of odor control by amending the Odor Prevention and Abatement Plan and proposing the actions or controls needed to minimize the odors. The facility shall implement the additional measures to reduce odors as expeditiously as practicable. [s. NR 429.03, | (1) The facility shall keep and maintain the following records:<br>(a) A record of all complaints related to malodorous emissions. The record shall include the date, time, and name of the complainant.<br>(b) A record of the results of each investigation related to a malodorous emissions complaint.<br>(c) The most recent version of the Odor Prevention and Abatement Plan.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059]* |

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|---|---|---|
| **J.** Stack S50; Control C50; Distillation and Related Processes: Process P50 - Molecular Sieve; Process P51 - Evaporator; Process P52 - Rectifier; Process P53 - Side Stripper; Process P65 – Liquefaction Tank (45,000 gal.); Process P70 - Modular Ethanol Dehydration System; Process P54 and Process P71 - Slurry Tank; Process P55 - Beer Stripper; Process P56 - De-Gas vessel; Process P50B - Molecular Sieve; Process P51B - Evaporator; Process P52B - Rectifier; Process P53B - Side Stripper; Process P54B - Slurry Tank; Process P55B - Beer Stripper; Process P56B - De-Gas Vessel. | | |
| 3. Pollutant: Malodorous Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | Wis. Adm. Code; 17-JJW-059]* | |

| **K.** Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 1.3 pounds per hour (each generator).[9] [s. NR 404.08(2), Wis. Adm. Code; 06-JJW-281]<br><br>(2) Emissions may not exceed 0.50 pound of particulate matter per million Btu heat input (each generator). [s. NR 485.055, Wis. Adm. Code]<br><br>(3) See stack parameters in I.ZZZ.7. [s. 285.65(3), Stats.] | (1) These generators may only be fired using on-road Diesel fuel oil. [ss. NR 404.08(2), NR 406.10, 445.09(2), Wis. Adm. Code; s. 285.65(7), Wis. Stats.; 06-JJW-281]<br><br>(2) The Diesel fuel oil sulfur content may not exceed that required for on-road diesel fuel: 0.05 wt. % sulfur initially, (15 ppm for any diesel fuel purchased after completion of implementation of ultra-low sulfur diesel fuel ~2010). [s. 285.65(7), Wis. Stats., s. NR 406.10, Wis. Adm. Code; 06-JJW-281] | (1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 5 or 17 including backhalf (Method 202) shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code; 06-JJW-281]<br><br>(2) The permittee shall maintain records of the type / grade of fuel oil received, the date received, the sulfur content and volume of each shipment received. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281] |

| **K.** Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 06-JJW-281] | (1) The requirements in 1.K.1.b. shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 06-JJW-281] | (1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 06-JJW-281]<br><br>(2) The permittee shall maintain records of the type / grade of fuel oil received, the date received, the sulfur content and volume of each shipment received. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281] |

| **K.** Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 3. Pollutant: Sulfur Dioxide ($SO_2$) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 0.9 pounds per hour per generator. [ss. NR 406.10, 404.08(2), Wis. Adm. Code; 06-JJW-281] | (1) The diesel fuel oil Sulfur content may not exceed that required for on-road Diesel fuel: 0.05 wt. % (500 ppm) Sulfur initially, (declining to 15 ppm upon completion of the ultra-low Sulfur on-road | (1) Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 6, 6C or 8 shall be used to demonstrate compliance. [s. NR 439.06(2)(a), Wis. Adm. Code; 06-JJW-281] |

[9] The particulate matter emissions limitation of 1.3 pounds per hour (from each generator) is more restrictive than the applicable limitation of s. NR 485.055, Wis. Adm. Code. This is necessary to prevent a violation of an ambient air quality standard and/or increment and is achieved through use of on-road diesel fuel oil.

| K. Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 3. Pollutant: Sulfur Dioxide ($SO_2$) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | Diesel implementation ~2010). [s. 285.65(7), Wis. Stats., s. NR 406.10, Wis. Adm. Code; 06-JJW-281]<br><br>(2) These generators may only be fired using on-road Diesel fuel oil. [s. 285.65(7), Wis. Stats.; ss. NR 445.09(2), NR 406.10, Wis. Adm. Code; 06-JJW-281]<br><br>(3) The facility shall confirm (through sampling, testing) that the sulfur content of the fuel oil within the distillate fuel oil storage tank does not exceed 0.05 wt. % sulfur upon permit issuance. [s. 285.65(3) and (7), Wis. Stats.; ss. NR 404.08(2), 439.06(2)(c), Wis. Adm. Code; 06-JJW-281] | (2) Whenever periodic fuel sampling and analysis of fossil and nonfossil fuels is required, it shall be conducted using the methods and procedures specified in s. NR 439.08, Wis. Adm. Code. [ss. NR 439.06(2)(a), 439.08, Wis. Adm. Code; 06-JJW-281]<br><br>(3) The permittee shall maintain records of the type / grade of fuel oil received, the date received, the sulfur content and volume of each shipment received. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281] |

| K. Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 4. Pollutant: Nitrogen Oxides ($NO_x$) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 1,208 pounds of nitrogen oxides per month from the two generators combined averaged over any 12 consecutive month period. This is based on the source provided emission factor of 0.024 lbs/HP-hr, an engine output of 2012 bhp (standby) and the operating hour restriction. [s. 285.65(7), Wis. Stats.; 06-JJW-281] | (1) Total diesel generator operating time for the two generators <u>combined</u> may not exceed 25.0 hours per month averaged over up to twelve consecutive months (average of 12.5 hrs/mo. each if run simultaneously). This was proposed by the facility as the maximum potential hours of operation. [s. 285.65(7), Wis. Stats.; s. NR 406.10, Wis. Adm. Code; 06-JJW-281] | (1) <u>Reference Test Method for Nitrogen Oxides ($NO_x$) Emissions:</u> Whenever nitrogen oxides compliance testing is required, USEPA Method 7, 7E, or another method approved by the Department in writing shall be used. When approved in writing, an equivalent test method may be substituted for the required test method. [s. NR 439.06(6), Wis. Adm. Code; 06-JJW-281]<br><br>(2) The permittee shall record the operating hours of each generator for the prior month within 14 days following the end of the month. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281]<br><br>(3) The permittee shall maintain records of the type / grade of fuel oil received, the date received, the sulfur content and volume of each shipment received. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281]<br><br>(4) The monthly hours of operation sums for the two generator for the prior 'n' months shall be summed and divided by 'n' to determine the average monthly usage for each generator. The value 'n' is the number of months since commencing initial operation or 12, whichever is smaller. This calculation shall be conducted and |

| K. Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 4. Pollutant: Nitrogen Oxides ($NO_x$) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | | recorded within 14 days following the end of the month. [s. NR 439.04, Wis. Adm. Code; 06-JJW-281]<br><br>(5) The facility shall maintain records of the diesel engines installed within the generator sets and documentation of the engine specifications and emission guarantees. [ss. NR 439.04(1)(d), NR 440.205(9)(g)2., Wis. Adm. Code; 06-JJW-281] |

| K. Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 5. Pollutant: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines - 40 CFR 63, Subpart ZZZZ | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) If you operate an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter on each unit if one is not already installed. [s. 285.65(13), Wis. Stats. and 40 CFR s. 63.6625(f)]<br><br>(2) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the following requirements:<br>(a) Change oil and filter every 500 hours of operation or annually whichever comes first<br>(b) Inspect air cleaner every 1,000 hours of operation or annually whichever comes first; and<br>(c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<br>(d) If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2d of 40 CFR Part 63, subpart ZZZZ, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required | (1) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times. [s. 285.65(13), Wis. Stats and 40 CFR s. 63.6605(a)]<br><br>(2) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make further efforts to reduce emissions if levels required by this standard have been achieved. 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 source. [s. 285.65(13), Wis. Stats. and 40 CFR s. 63.6605(b)]<br><br>(3) The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d to this subpart. The analysis program must at a minimum | (1) You must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall maintain and have available records of the following items for each engine (generator)<br>(a) The maintenance activities performed, including oil changes, inspections, and any part replacements;<br>(b) A copy of the manufacturer's emission-related written instructions or the maintenance plan developed by the permittee;<br>(c) The hours of operation, including the classifications of these hours (purpose of use);<br>(d) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) for each calendar month;<br>(e) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) year-to-date for each calendar month;<br>(f) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and<br>(g) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.<br>[40 CFR ss. 63.6655(d), (e)(2) and (f)(1), s. 285.65(13), Wis. Stats., ss. NR 407.09(4)(a)1, NR 439.04(1)(d), Wis. Adm. Code] |

| K. Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 5. Pollutant: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines - 40 CFR 63, Subpart ZZZZ | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| and the federal, state or local law under which the risk was deemed unacceptable.<br>[s. 285.65(13), Wis. Stats. and 40 CFR s. 63.6603(a), Table 2d]<br><br>(3) If you own or operate an existing emergency stationary RICE located at an area source of HAP emissions, you must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [s. 285.65(13), Wis. Stats. and 40 CFR s. 63.6625(e)]<br><br>(4) *Requirements for emergency stationary RICE.* (1) If you own or operate an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (a) through (c) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (a) through (c) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (a) through (c) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.<br>(a) There is no time limit on the use of emergency stationary RICE in emergency situations.<br>(b) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the | analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR s. 63.6625(i)]<br><br>(4) The permittee must minimize each engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR ss. 63.6605(a), 63.6625(h) , s. 285.65(13), Wis. Stats., s. NR 407.09(4)(a)3.b., Wis. Adm. Code] | (2) If the monthly year-to-date total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) for any engine (generator) exceeds 50 hours, the monthly year-to-date total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for any engine (generator) exceeds 100 hours, and/or any of the requirement maintenance items are not timely performed, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [ss. NR 407.09(4)(a)1, NR 439.04(1)(d), Wis. Adm. Code]<br><br>(3) If an emergency stationary RICE with a site rating of more than 100 brake HP enters a contractual obligation to be available for or operates for more than 15 hours per calendar year for the purposes specified in 40 CFR s. 63.6640(f)(2) (ii) and (iii) (emergency demand response and power stabilization), the permittee shall notify the Department in writing within 30 days upon entering such an agreement.[10] [s. 285.65(13), Wis. Stats., ss. NR 407.09(4)(a)1, NR 439.03(1)(a), Wis. Adm. Code] |

[10] Operating or being contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR s. 63.6640(f)(2) (ii) and (iii) (emergency demand response and power stabilization) may result in the engine(generator) being subject to additional requirements.

| **K.** Process B90, B91, Stack S90, S91 - Two 1500 KW (17 MMBtu/hr) Diesel Generators | | |
|---|---|---|
| 5. Pollutant: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines - 40 CFR 63, Subpart ZZZZ | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.<br>(c) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph, as long as the power provided by the financial arrangement is limited to emergency power.<br>[s. 285.65(13), Wis. Stats. and 40 CFR s. 63.6640(f)] | | |

**L. Process F04** - Process Equipment (Valves, Pumps, Flanges, etc.) Leaks.

1. Pollutant: Volatile Organic Compound (VOC) Emissions

**a.** Conditions

*40 CFR 60.480a Applicability and designation of affected facility.*

(a) (1) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry.

(2) The group of all equipment (defined in 40 CFR 60.481a) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after November 7, 2006, shall be subject to the requirements of this subpart.

(c) Addition or replacement of equipment for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d) (1) If an owner or operator applies for one or more of the exemptions in this paragraph, then the owner or operator shall maintain records as required in 40 CFR 60.486a(i).

(2) Any affected facility that has the design capacity to produce less than 1,000 Mg/yr (1,102 ton/yr) of a chemical listed in 40 CFR 60.489 is exempt from 40 CFR 60.482–1a through 60.482–11a.

(3) If an affected facility produces heavy liquid chemicals only from heavy liquid feed or raw materials, then it is exempt from 40 CFR 60.482–1a through 60.482–11a.

(4) Any affected facility that produces beverage alcohol is exempt from 40 CFR 60.482–1a through 60.482–11a.

(5) Any affected facility that has no equipment in volatile organic compounds (VOC) service is exempt from 40 CFR 60.482–1a through 60.482–11a.

(e) *Alternative means of compliance —*

(1) *Option to comply with part 65.*

(i) Owners or operators may choose to comply with the provisions of 40 CFR part 65, subpart F, to satisfy the requirements of 40 CFR 60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 65, subpart F, the requirements of 40 CFR 60.485a(d), (e), and (f), and 60.486a(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart F must also comply with 40 CFR 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(1)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 65, subpart F, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart F, must comply with 40 CFR part 65, subpart A.

(2) *Part 63, subpart H.*

(i) Owners or operators may choose to comply with the provisions of 40 CFR part 63, subpart H, to satisfy the requirements of 40 CFR 60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 63, subpart H, the requirements of 40 CFR 60.485a(d), (e), and (f), and 40 CFR 60.486a(i) and (j) still apply.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 63, subpart H must also comply with 40 CFR 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 63, subpart H, except that provisions required to be met prior to implementing 40 CFR part 63 still apply. Owners and operators who choose to comply with 40 CFR part 63, subpart H, must comply with 40 CFR part 63, subpart A.

(f) *Stay of standards.*

(1) Owners or operators that start a new, reconstructed, or modified affected source prior to November 16, 2007 are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the Federal Register.

(i) The definition of "capital expenditure" in 40 CFR 60.481a of this subpart. While the definition of "capital expenditure" is stayed, owners or operators should use the definition found in 40 CFR 60.481 of subpart VV of this part.

(ii) [Reserved]

(2) Owners or operators are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the Federal Register.

(i) The definition of "process unit" in 40 CFR 60.481a of this subpart. While the definition of "process unit" is stayed, owners or operators should use the following definition:

**L. Process F04** - Process Equipment (Valves, Pumps, Flanges, etc.) Leaks.

1. Pollutant: Volatile Organic Compound (VOC) Emissions

**a.** Conditions

*Process unit* means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in 40 CFR 60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

(ii) The method of allocation of shared storage vessels in 40 CFR 60.482–1a(g) of this subpart.

(iii) The standards for connectors in gas/vapor service and in light liquid service in 40 CFR 60.482–11a of this subpart.

[72 FR 64883, Nov. 16, 2007, as amended at 73 FR 31375, June 2, 2008]

[s. 285.65(13), Wis. Stats., 40 CFR 60.480a; 17-JJW-059]

*40 CFR 60.481a Definitions.*

As used in section I.X. of this permit, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA) or in subpart A of part 60, and the following terms shall have the specific meanings given them.

*Capital expenditure* means, in addition to the definition in 40 CFR 60.2, an expenditure for a physical or operational change to an existing facility that:

(a) Exceeds P, the product of the facility's replacement cost, R, and an adjusted annual asset guideline repair allowance, A, as reflected by the following equation: $P = R \times A$, where:

(1) The adjusted annual asset guideline repair allowance, A, is the product of the percent of the replacement cost, Y, and the applicable basic annual asset guideline repair allowance, B, divided by 100 as reflected by the following equation:

$A = Y \times (B \div 100)$;

(2) The percent Y is determined from the following equation: $Y = 1.0 - 0.575 \log X$, where X is 2006 minus the year of construction; and

(3) The applicable basic annual asset guideline repair allowance, B, is selected from the following table consistent with the applicable subpart:

Table for Determining Applicable Value for B

| Subpart applicable to facility | Value of B to be used in equation |
|---|---|
| VVa | 12.5 |
| GGGa | 7.0 |

*(see below), and the replacement definition under 40 CFR 60.480a(f)(1)(i) which references the subpart VV definition under 40 CFR 60.481 for sources constructed or modified prior to Nov. 16, 2007. This facility was modified after this date.*

*Closed-loop system* means an enclosed system that returns process fluid to the process.

*Closed-purge system* means a system or combination of systems and portable containers to capture purged liquids. Containers for purged liquids must be covered or closed when not being filled or emptied.

*Connector* means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation.

*Control device* means an enclosed combustion device, vapor recovery system, or flare.

*Distance piece* means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

*Double block and bleed system* means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

*Duct work* means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

*Equipment* means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart.

*First attempt at repair* means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

**L. Process F04** - Process Equipment (Valves, Pumps, Flanges, etc.) Leaks.

1. Pollutant: Volatile Organic Compound (VOC) Emissions

**a.** Conditions

*Fuel gas* means gases that are combusted to derive useful work or heat.
*Fuel gas system* means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.
*Hard-piping* means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as ASME B31.3, Process Piping (available from the American Society of Mechanical Engineers, P.O. Box 2300, Fairfield, NJ 07007–2300).
*In gas/vapor service* means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.
*In heavy liquid service* means that the piece of equipment is not in gas/vapor service or in light liquid service.
*In light liquid service* means that the piece of equipment contains a liquid that meets the conditions specified in 40 CFR 60.485a(e).
*In-situ sampling systems* means non-extractive samplers or in-line samplers.
*In vacuum service* means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.
*In VOC service* means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight. (The provisions of 40 CFR 60.485a(d) specify how to determine that a piece of equipment is not in VOC service.)
*Initial calibration value* means the concentration measured during the initial calibration at the beginning of each day required in 40 CFR 60.485a(b)(1), or the most recent calibration if the instrument is recalibrated during the day (i.e., the calibration is adjusted) after a calibration drift assessment.
*Liquids dripping* means any visible leakage from the seal including spraying, misting, clouding, and ice formation.
*Open-ended valve or line* means any valve, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.
*Pressure release means* the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.
*Process improvement* means routine changes made for safety and occupational health requirements, for energy savings, for better utility, for ease of maintenance and operation, for correction of design deficiencies, for bottleneck removal, for changing product requirements, or for environmental control.
~~*Process unit* means the components assembled and connected by pipes or ducts to process raw materials and to produce, as intermediate or final products, one or more of the chemicals listed in 40 CFR 60.489. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. For the purpose of this subpart, process unit includes any feed, intermediate and final product storage vessels (except as specified in 40 CFR 60.482–1a(g)), product transfer racks, and connected ducts and piping. A process unit includes all equipment as defined in this subpart.~~ (*see below*), and the replacement definition noted under 40 CFR 60.480a(f)(2)(i).
*Process unit shutdown* means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. The following are not considered process unit shutdowns:

(1) An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours.
(2) An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown.
(3) The use of spare equipment and technically feasible bypassing of equipment without stopping production.

*Quarter* means a 3-month period; the first quarter concludes on the last day of the last full month during the 180 days following initial startup.
*Repaired* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as defined in the applicable sections of this subpart and, except for leaks identified in accordance with 40 CFR 60.482–2a(b)(2)(ii) and (d)(6)(ii) and (d)(6)(iii), 60.482–3a(f), and 60.482–10a(f)(1)(ii), is re-monitored as specified in 40 CFR 60.485a(b) to verify that emissions from the equipment are below the applicable leak definition.
*Replacement cost* means the capital needed to purchase all the depreciable components in a facility.
*Sampling connection system* means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.
*Sensor* means a device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid level.

**L. Process F04** - Process Equipment (Valves, Pumps, Flanges, etc.) Leaks.

1. Pollutant: Volatile Organic Compound (VOC) Emissions

**a.** Conditions

*Storage vessel* means a tank or other vessel that is used to store organic liquids that are used in the process as raw material feedstocks, produced as intermediates or final products, or generated as wastes. Storage vessel does not include vessels permanently attached to motor vehicles, such as trucks, railcars, barges or ships.
*Synthetic organic chemicals manufacturing industry* means the industry that produces, as intermediates or final products, one or more of the chemicals listed in 40 CFR 60.489.
*Transfer rack* means the collection of loading arms and loading hoses, at a single loading rack, that are used to fill tank trucks and/or railcars with organic liquids.
*Volatile organic compounds* or VOC means, for the purposes of this subpart, any reactive organic compounds as defined in 40 CFR 60.2 Definitions.
Effective Date Note: 40 CFR 60.480a (f) *Stay of standards.* (1) Owners or operators that start a new, reconstructed, or modified affected source prior to November 16, 2007 are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the Federal Register .
At 73 FR 31376, June 2, 2008, in 40 CFR 60.481a, the definitions of "capital expenditure" and "process unit" were stayed until further notice.
(2) Owners or operators are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the Federal Register .
(i) The definition of "process unit" in 40 CFR 60.481a of this subpart. While the definition of "process unit" is stayed, owners or operators should use the following definition:
*Process unit* means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in 40 CFR 60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.
[s. 285.65(13), Wis. Stats., 40 CFR 60.481a; 17-JJW-059]

*40 CFR 60.482-1a Standards: General.*
(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of 40 CFR 60.482–1a through 60.482–10a or 40 CFR 60.480a(e) for all equipment within 180 days of initial startup *(following modification)*.
(b) Compliance with 40 CFR 60.482–1a to 60.482–10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485a.
(c) (1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of 40 CFR 60.482–2a, 60.482–3a, 60.482–5a, 60.482–6a, 60.482–7a, 60.482–8a, and 60.482–10a as provided in 40 CFR 60.484a.
(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 40 CFR 60.482–2a, 60.482–3a, 60.482–5a, 60.482–6a, 60.482–7a, 60.482–8a, or 60.482–10a, an owner or operator shall comply with the requirements of that determination.
(d) Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482–2a through 60.482–10a if it is identified as required in 40 CFR 60.486a(e)(5).
(e) Equipment that an owner or operator designates as being in VOC service less than 300 hr/yr is excluded from the requirements of 40 CFR 60.482–2a through 60.482–11a if it is identified as required in 40 CFR 60.486a(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section.
(1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.
(2) The equipment is in VOC service only during process malfunctions or other emergencies.
(3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.
(f) (1) If a dedicated batch process unit operates less than 365 days during a year, an owner or operator may monitor to detect leaks from pumps, valves, and open-ended valves or lines at the frequency specified in the following table instead of monitoring as specified in 40 CFR 60.482–2a, 60.482–7a, and 60.483.2a:

| Operating time (percent of hours during year) | Equivalent monitoring frequency time in use | | |
|---|---|---|---|
| | Monthly | Quarterly | Semiannually |
| 0 to <25 | Quarterly | Annually | Annually. |
| 25 to <50 | Quarterly | Semiannually | Annually. |
| 50 to <75 | Bimonthly | Three quarters | Semiannually. |
| 75 to 100 | Monthly | Quarterly | Semiannually. |

(2) Pumps and valves that are shared among two or more batch process units that are subject to this subpart may be monitored at the frequencies specified in paragraph (f)(1)

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of this section, provided the operating time of all such process units is considered.

(3) The monitoring frequencies specified in paragraph (f)(1) of this section are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor at any time during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined in paragraphs (f)(3)(i) through (iv) of this section.

(i) When monitoring is conducted quarterly, monitoring events must be separated by at least 30 calendar days.

(ii) When monitoring is conducted semiannually ( *i.e.* , once every 2 quarters), monitoring events must be separated by at least 60 calendar days.

(iii) When monitoring is conducted in 3 quarters per year, monitoring events must be separated by at least 90 calendar days.

(iv) When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-1a. Standards: General (a) – (f); 17-JJW-059

~~(g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to this subpart, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to this subpart of this part, the storage vessel is assigned to any process unit subject to subpart VV of this part. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service.~~

Effective Date Note: At 73 FR 31376, June 2, 2008, in 40 CFR 60.482–1a, paragraph (g) was stayed until further notice.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-1a Standards: General. (g); 17-JJW-059

*40 CFR 60.482-2a Standards: Pumps in light liquid service.*

(a) (1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485a(b), except as provided in 40 CFR 60.482–1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in 40 CFR 60.482–1a(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in 40 CFR 60.482–1a(f).

(b) (1) The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;

(ii) 2,000 ppm or greater for all other pumps.

(2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable.

(i) Monitor the pump within 5 days as specified in 40 CFR 60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section.

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping.

(c) (1) When 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 40 CFR 60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable.

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the

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requirements specified in paragraphs (d)(1) through (6) of this section are met.

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482–10a; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) (i) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section prior to the next required inspection.

(A) Monitor the pump within 5 days as specified in 40 CFR 60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.

(B) Designate the visual indications of liquids dripping as a leak.

(5) (i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm.

(ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.

(6) (i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.

(ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.

(iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.

(e) Any pump that is designated, as described in 40 CFR 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:

(1) Has no externally actuated shaft penetrating the pump housing;

(2) 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 40 CFR 60.485a(c); and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482–10a, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-2a; 17-JJW-059]

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*40 CFR 60.482-3a Standards: Compressors.*

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR 60.482–1a(c) and paragraphs (h), (i), and (j) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482–10a; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e) (1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g) (1) When 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 40 CFR 60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482–10a, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in 40 CFR 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:

(1) 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 40 CFR 60.485a(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of 40 CFR 60.14 or 40 CFR 60.15 is exempt from paragraphs (a) through (e) and (h) of this section, provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-3a; 17-JJW-059]

*40 CFR 60.482-4a Standards: Pressure relief devices in gas/vapor service.*

(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 background, as determined by the methods specified in 40 CFR 60.485a(c).

(b) (1) 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, except as provided in 40 CFR 60.482–9a.

(2) 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 40 CFR 60.485a(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 CFR 60.482–10a is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each

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pressure release, except as provided in 40 CFR 60.482–9a.
[s. 285.65(13), Wis. Stats., 40 CFR 60.482-4a; 17-JJW-059]

*40 CFR 60.482-5a Standards: Sampling connection systems.*
(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 60.482–1a(c) and paragraph (c) of this section.
(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section.
(1) Gases displaced during filling of the sample container are not required to be collected or captured.
(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.
(3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.
(4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.
(i) Return the purged process fluid directly to the process line.
(ii) Collect and recycle the purged process fluid to a process.
(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR 60.482–10a.
(iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities:
(A) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;
(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266;
(C) A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261;
(D) A waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 CFR 61.343 through 40 CFR 61.347; or
(E) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR part 261.
(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.
[s. 285.65(13), Wis. Stats., 40 CFR 60.482-5a; 17-JJW-059]

*40 CFR 60.482-6a Standards: Open-ended valves or lines.*
(a) (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482–1a(c) and paragraphs (d) and (e) of this section.
(2) 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.
(b) Each open-ended valve or line equipped 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.
(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times.
(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b), and (c) of this section.
(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if

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capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.
[s. 285.65(13), Wis. Stats., 40 CFR 60.482-6a; 17-JJW-059]

*40 CFR 60.482-7a Standards: Valves in gas/vapor service and in light liquid service.*

(a) (1) Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, 40 CFR 60.482–1a(c) and (f), and 40 CFR 60.483–1a and 60.483–2a.

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, 40 CFR 60.482–1a(c), and 40 CFR 60.483–1a and 60.483–2a.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

(ii) If the existing valves in the process unit are monitored in accordance with 40 CFR 60.483–1a or 40 CFR 60.483–2a, count the new valve as leaking when calculating the percentage of valves leaking as described in 40 CFR 60.483–2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

(b) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(c) (1) (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.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d) (1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in 40 CFR 60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR 60.485a(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section, and

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in 40 CFR 60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

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(2) The process unit within which the valve is located either:

(i) Becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 and was constructed on or before January 5, 1981; or

(ii) Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-7a; 17-JJW-059]

*40 CFR 60.482-8a Standards: Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service.*

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485a(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) (1) When 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 40 CFR 60.482–9a.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under 40 CFR 60.482–2a(c)(2) and 60.482–a(e).

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-8a; 17-JJW-059]

*40 CFR 60.482-9a Standards: Delay of repair.*

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.

(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.

(c) Delay of repair for valves and connectors will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482–10a.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(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. 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.

(f) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-9a; 17-JJW-059]

*40 CFR 60.482-10a Standards: Closed vent systems and control devices.*

(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume (ppmv), whichever is less stringent.

(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit

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concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

(d) Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60.18.

(e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (ii) of this section:

(i) Conduct an initial inspection according to the procedures in 40 CFR 60.485a(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in 40 CFR 60.485a(b); and

(ii) Conduct annual inspections according to the procedures in 40 CFR 60.485a(b).

(g) Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

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

(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (2) of this section:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (3) of this section:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through 40 CFR 60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The owner or operator shall record the information specified in paragraphs (l)(1) through (5) of this section.

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in 40 CFR 60.486a(c).

(4) For each inspection conducted in accordance with 40 CFR 60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the

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inspection, and a statement that no leaks were detected.

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-10a; 17-JJW-059]

~~*40 CFR 60.482-11a – Standards: Connectors in gas/vapor service and in light liquid service.*~~

~~(a) The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.~~

~~(b) Except as allowed in 40 CFR 60.482-1a(c), 40 CFR 60.482-10a, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.~~

~~(1) The connectors shall be monitored to detect leaks by the method specified in 40 CFR 60.485a(b) and, as applicable, 40 CFR 60.485a(c).~~

~~(2) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.~~

~~(3) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section.~~

~~(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).~~

~~(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4-year monitoring period.~~

~~(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (b)(3)(iii)(C) of this section, as appropriate.~~

~~(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.~~

~~(B) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent of leaking connectors within the total monitored connectors.~~

~~(C) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.~~

~~(iv) If, during the monitoring conducted pursuant to paragraphs (b)(3)(i) through (iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.~~

~~(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.~~

~~(c) For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using the following equation:~~

~~$\%C_L = C_L / C_t * 100$~~

~~Where:~~

~~$\%C_L$ = Percent of leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (iii) of this section.~~

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~~$C_L$ = Number of connectors measured at 500 ppm or greater, by the method specified in 40 CFR 60.485a(b).~~

~~$C_t$ = Total number of monitored connectors in the process unit or affected facility.~~

~~(d) When a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected.~~

~~(e) Any connector that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section if:~~

~~(1) The owner or operator of the connector demonstrates that the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) and (b) of this section; and~~

~~(2) The owner or operator of the connector has a written plan that requires monitoring of the connector as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (d) of this section if a leak is detected.~~

~~(f) *Inaccessible, ceramic, or ceramic-lined connectors.*~~

~~(1) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of 40 CFR 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (f)(1)(i) through (vi) of this section, as applicable:~~

~~(i) Buried;~~

~~(ii) Insulated in a manner that prevents access to the connector by a monitor probe;~~

~~(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;~~

~~(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground;~~

~~(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold; or~~

~~(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.~~

~~(2) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.~~

~~(g) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of paragraph (f) of this section, identify the connectors subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.~~

EFFECTIVE DATE NOTE: At 73 FR 31376, June 2, 2008, 40 CFR 60.482-11a was stayed until further notice.

[s. 285.65(13), Wis. Stats., 40 CFR 60.482-11a; 17-JJW-059]

*40 CFR 60.483-1a Alternative standards for valves—allowable percentage of valves leaking.*

(a) An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in 40 CFR 60.487a(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with 40 CFR 60.482–7a(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in 40 CFR 60.485a(b).

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(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(3) 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.

(d) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent, determined as described in 40 CFR 60.485a(h).

[s. 285.65(13), Wis. Stats., 40 CFR 60.483-1a; 17-JJW-059]

*40 CFR 60.483-2a Alternative standards for valves—skip period leak detection and repair.*

(a) (1) An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in 40 CFR 60.487(d)a.

(b) (1) An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in 40 CFR 60.482–7a.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in 40 CFR 60.482–7a but can again elect to use this section.

(5) The percent of valves leaking shall be determined as described in 40 CFR 60.485a(h).

(6) An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

(7) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with 40 CFR 60.482–7a(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.

[s. 285.65(13), Wis. Stats., 40 CFR 60.483-2a; 17-JJW-059]

*40 CFR 60.484a Equivalence of means of emission limitation.*

(a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

(b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

(2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

(2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

(3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

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(5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

(d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

(e) (1) After a request for determination of equivalence is received, the Administrator will publish a notice in the Federal Register and provide the opportunity for public hearing if the Administrator judges that the request may be approved.

(2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register.

(3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the CAA.

(f) (1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

[s. 285.65(13), Wis. Stats., 40 CFR 60.484a; 17-JJW-059]

*40 CFR 60.485a Test methods and procedures.*

(a) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b).

(b) The owner or operator shall determine compliance with the standards in 40 CFR 60.482-1a through 60.482-11a, 60.483a, and 60.484a as follows:

(1) 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 of appendix A-7 of this part. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in 40 CFR 60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

(c) The owner or operator shall determine compliance with the no-detectable-emission standards in 40 CFR 60.482-2a(e), 60.482-3a(i), 60.482-4a, 60.482-7a(f), and 60.482-10a(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 of appendix A-7 of this part shall be used to determine the background level. 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.

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(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference—see 40 CFR 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d)(1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. $H_2O$ at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference—see 40 CFR 60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. $H_2O$ at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 of appendix A-7 of this part shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$V_{max} = K_1 + K_2 H_T$

Where:

$V_{max}$ = Maximum permitted velocity, m/sec (ft/sec).

$H_T$ = Net heating value of the gas being combusted, MJ/scm (Btu/scf).

$K_1$ = 8.706 m/sec (metric units) = 28.56 ft/sec (English units).

$K_2$ = 0.7084 $m^4$/(MJ-sec) (metric units) = 0.087 $ft^4$/(Btu-sec) (English units).

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

$$H_T = K\sum_{i=1}^{n} C_i H_i$$

Where:

K = Conversion constant, $1.740 \times 10^{-7}$ (g-mole)(MJ)/(ppm-scm-kcal) (metric units) = $4.674 \times 10^{-6}$ [(g-mole)(Btu)/(ppm-scf-kcal)] (English units).

$C_i$ = Concentration of sample component "i," ppm

$H_i$ = net heat of combustion of sample component "i" at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole.

(5) Method 18 of appendix A-6 of this part or ASTM D6420-99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts per billion by volume and 100 ppmv) and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference-see 40 CFR 60.17) shall be used to determine the concentration of sample component "i."

(6) ASTM D2382-76 or 88 or D4809-95 (incorporated by reference-see 40 CFR 60.17) shall be used to determine the net heat of combustion of component "i" if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D of appendix A-7 of this part, 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.

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(h) The owner or operator shall determine compliance with 40 CFR 60.483-1a or 40 CFR 60.483-2a as follows:

(1) The percent of valves leaking shall be determined using the following equation:

$\%V_L = (V_L / V_T) * 100$

Where:

$\%V_L$ = Percent leaking valves.

$V_L$ = Number of valves found leaking.

$V_T$ = The sum of the total number of valves monitored.

(2) The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

(3) The number of valves leaking shall include valves for which repair has been delayed.

(4) Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service.

(5) If the process unit has been subdivided in accordance with 40 CFR 60.482-7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.

(6) The total number of valves monitored does not include a valve monitored to verify repair.

[s. 285.65(13), Wis. Stats., 40 CFR 60.485a; 17-JJW-059]

*40 CFR 60.486a Recordkeeping requirements.*

(a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a.

(i) Monitoring instrument identification.

(ii) Operator identification.

(iii) Equipment identification.

(iv) Date of monitoring.

(v) Instrument reading.

(b) When each leak is detected as specified in 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7a(c) and no leak has been detected during those 2 months.

(3) The identification on a connector may be removed after it has been monitored as specified in 40 CFR 60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring.

(4) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

(c) When each leak is detected as specified in 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

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(4) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be non-repairable, except when a pump is repaired by eliminating indications of liquids dripping.

(5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10a shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10a(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed vent systems and control devices required in 40 CFR 60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR 60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a.

(e) The following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1a to 60.482-11a shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2) (i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2a(e), 60.482-3a(i), and 60.482-7a(f).

(ii) The designation of equipment as subject to the requirements of 40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i), or 40 CFR 60.482-7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

(3) A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4a.

(4) (i) The dates of each compliance test as required in 40 CFR 60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with 40 CFR 60.482-1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

(7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

(8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A-7 of this part and 40 CFR 60.485a(b).

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A-7 of this part.

(v) Results of each calibration drift assessment required by 40 CFR 60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).

(vi) If an owner or operator makes their own calibration gas, a description of the procedure used.

**L. Process F04** - Process Equipment (Valves, Pumps, Flanges, etc.) Leaks.

1. Pollutant: Volatile Organic Compound (VOC) Emissions

**a.** Conditions

(9) The connector monitoring schedule for each process unit as specified in 40 CFR 60.482-11a(b)(3)(v).

(10) Records of each release from a pressure relief device subject to 40 CFR 60.482-4a.

(f) The following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7a(g) and (h), all pumps subject to the requirements of 40 CFR 60.482-2a(g), and all connectors subject to the requirements of 40 CFR 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.

(2) 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.

(g) The following information shall be recorded for valves complying with 40 CFR 60.483-2a:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in 40 CFR 60.482-2a(d)(5) and 60.482-3a(e)(2) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480a(d):

(1) An analysis demonstrating the design capacity of the affected facility,

(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and

(3) An analysis demonstrating that equipment is not in VOC service.

(j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(k) The provisions of 40 CFR 60.7(b) and (d) do not apply to affected facilities subject to this subpart

[s. 285.65(13), Wis. Stats., 40 CFR 60.486a; 17-JJW-059]

*40 CFR 60.487a Reporting requirements.*

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) Number of valves subject to the requirements of 40 CFR 60.482-7a, excluding those valves designated for no detectable emissions under the provisions of 40 CFR 60.482-7a(f).

(3) Number of pumps subject to the requirements of 40 CFR 60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of 40 CFR 60.482-2a(e) and those pumps complying with 40 CFR 60.482-2a(f).

(4) Number of compressors subject to the requirements of 40 CFR 60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of 40 CFR 60.482-3a(i) and those compressors complying with 40 CFR 60.482-3a(h).

(5) Number of connectors subject to the requirements of 40 CFR 60.482-11a.

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in 40 CFR 60.486a:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in 40 CFR 60.482-7a(b) or 40 CFR 60.483-2a,

(ii) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7a(d)(1),

(iii) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

(iv) Number of pumps for which leaks were not repaired as required in 40 CFR 60.482-2a(c)(1) and (d)(6),

**L. Process F04** - Process Equipment (Valves, Pumps, Flanges, etc.) Leaks.

1. Pollutant: Volatile Organic Compound (VOC) Emissions

**a.** Conditions

(v) Number of compressors for which leaks were detected as described in 40 CFR 60.482-3a(f),
(vi) Number of compressors for which leaks were not repaired as required in 40 CFR 60.482-3a(g)(1),
(vii) Number of connectors for which leaks were detected as described in 40 CFR 60.482-11a(b)
(viii) Number of connectors for which leaks were not repaired as required in 40 CFR 60.482-11a(d), and
(ix)-(x) [Reserved]
(xi) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.
(4) Revisions to items reported according to paragraph (b) of this section if changes have occurred since the initial report or subsequent revisions to the initial report.
(d) An owner or operator electing to comply with the provisions of 40 CFR 60.483-1a or 60.483-2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.
(e) An owner or operator shall report the results of all performance tests in accordance with 40 CFR 60.8 of the General Provisions. The provisions of 40 CFR 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.
(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.
[s. 285.65(13), Wis. Stats., 40 CFR 60.487a; 17-JJW-059]

*40 CFR 60.488a Reconstruction.*
For the purposes of this subpart:
(a) The cost of the following frequently replaced components of the facility shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital costs that would be required to construct a comparable new facility" under 40 CFR 60.15: Pump seals, nuts and bolts, rupture disks, and packings.
(b) Under 40 CFR 60.15, the "fixed capital cost of new components" includes the fixed capital cost of all depreciable components (except components specified in 40 CFR 60.488a(a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the applicability date for the appropriate subpart. (See the "Applicability and designation of affected facility" section of the appropriate subpart.) For purposes of this paragraph, "commenced" means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.
[s. 285.65(13), Wis. Stats., 40 CFR 60.488a; 17-JJW-059]

*40 CFR 60.489a List of chemicals produced by affected facilities.*
Process units that produce, as intermediates or final products, chemicals listed in 40 CFR 60.489 are covered under 40 CFR 60, subpart VVa. The applicability date for process units producing one or more of these chemicals is November 8, 2006.
[s. 285.65(13), Wis. Stats., 40 CFR 60.489a; 17-JJW-059]

| **M.** Boiler B70, B71, Stack S70, S71 - 95 million Btu/hr Natural Gas Fired Boilers (Each) | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 0.01 pounds per million Btu.[11] [s. 285.65(3), s. 285.65(7), Wis. Stats.; s. NR 404.08(2), Wis. Adm. Code; 04-DCF-295]<br><br>(2) Emissions may not exceed for each stack 0.15 pounds of particulate matter per million Btu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code]<br><br>(3) See stack parameters in I.ZZZ.7. [s. 285.65(3), Stats.] | (1) Only natural gas may be used as a fuel. [ss. NR 406.04(2), 406.10, Wis. Adm. Code; 04-DCF-295] | (1) Reference Test Method for Particulate Matter Emissions: Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5 (including condensable particulate by US EPA Method 202). [s. NR 439.06(1), Wis. Adm. Code; 04-DCF-295]<br><br>(2) The permittee shall record monthly, the type and quantity of fuel (e.g. natural gas) used in the boiler.[12] [s. NR 440.207(9)(g), Wis. Adm. Code, 40 CFR s. 60.48c(g); 04-DCF-295] |

| **M.** Boiler B70, B71, Stack S70, S71 - 95 million Btu/hr Natural Gas Fired Boilers (Each) | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 04-DCF-295] | (1) Only natural gas may be used as a fuel. [ss. NR 406.04(2), 406.10, Wis. Adm. Code; 04-DCF-295] | (1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]<br><br>(2) The permittee shall record monthly, the type and quantity of fuel (e.g. natural gas) used in the boiler. [s. NR 440.207(9)(g)(2), Wis. Adm. Code, 40 CFR s. 60.48c(g); 04-DCF-295] |

| **M.** Boiler B70, B71, Stack S70, S71 | | |
|---|---|---|
| 3. Pollutant: Nitrogen Oxides ($NO_x$) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) 0.095 pounds per million Btu when firing natural gas. [ss. 285.65(3), 285.65(7), Wis. Stats.; 04-DCF-295] | (1) Only natural gas may be used as a fuel. This is the only fuel listed in the permit application. [s. NR 406.10, Wis. Adm. Code; 04-DCF-295] | (1) Reference Test Method for Nitrogen Oxides ($NO_x$) Emissions: Whenever nitrogen oxides compliance testing is required, USEPA Method 7, 7E, or another method approved by the Department in writing shall be used. When approved in writing, an equivalent test method may be substituted for the required test method. [s. NR |

[11] This emission limit (rounded up and based on the AP-42 Emission Factor of 0.0076 lbs/MMBtu) is proposed by the permittee to avoid any exceedance of the ambient air standard or increment. The emission limit is more restrictive than that in s. NR 415.06(2)(a), Wis. Adm. Code (0.15 lbs/MMBtu).

[12] Although s. NR 440.207(9)(g), Wis. Adm. Code, requires daily fuel use recordkeeping, the federal version of the rule was modified to allow for monthly recordkeeping for boilers that are not subject to any emissions standard (excluding opacity) under the NSPS. This allowance is codified in 40 CFR s. 60.48c(g)(2).

| **M.** Boiler B70, B71, Stack S70, S71 | | |
|---|---|---|
| 3. Pollutant: Nitrogen Oxides ($NO_x$) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | | 439.06(6), Wis. Adm. Code; 04-DCF-295]<br><br>(2) The permittee shall record monthly, the type and quantity of fuel (e.g. natural gas) used in the boiler. [ss. NR 439.04, NR 440.207(9)(g), Wis. Adm. Code, 40 CFR s. 60.48c(g); 04-DCF-295]<br><br>(3) The facility shall maintain records of the burners installed within the boilers and documentation of the burner specifications and emission guarantees. [ss. NR 439.04(1)(d), NR 440.205(9)(g)2., Wis. Adm. Code; 04-DCF-295] |

| **N.** Tank T05 - 12,800 gallon Storage Tank for Gasoline Denaturant. | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) The storage tank shall be equipped with a fixed roof and a pressure / vacuum conservation vent. [ss. NR 406.10 and NR 419.05(2), Wis. Adm. Code; 17-JJW-059]<br><br>(2) The storage tank shall be equipped with a submerged fill pipe. [s. NR 419.06(2), Wis. Adm. Code; 17-JJW-059]<br><br>(3) The permittee shall only store natural gasoline (as defined by ASTM D8011-17 or equivalent method) or blends consisting of 90% natural gasoline in this tank. [s. 285.65(7), Wis. Stats.; 17-JJW-059] | (2) The recordkeeping in I.N.c.(3) shall be considered the compliance demonstration for the limitations in I.N.1.a. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 17-JJW-059] | (1) Reference Test Method for Volatile Organic Compounds (VOC) Emissions: Whenever VOC compliance testing is required, USEPA Method 18 or 25A shall be used. When approved in writing an equivalent test method may be substituted for the required test method. [s. NR 439.06(8), Wis. Adm. Code; 17-JJW-059]<br><br>(2) The permittee of each storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. The permittee shall also keep and maintain on site current "as built" technical drawings, blueprints or equivalent records of the storage tanks. These records shall be kept for the life of the vessel. [s. NR 440.285(7)(a) and (b), Wis. Adm. Code, 40 CFR s. 60.116b(b); 17-JJW-059]<br><br>(3) The permittee shall keep and maintain the following records:<br>(a) Technical drawings, blueprints or equivalent records that document compliance with the requirements of I.N.1.a.(1)&(2); and<br>(b) A record of each material stored in the storage tank.<br>[s. NR 439.04(1)(d); 17-JJW-059] |

| **O. Tanks T02, T04** - 150,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)<br>**Tank T11** - 489,000 gallon Volatile Organic Liquid Storage Tank (2012)<br>**Tanks T01 and T03** - 80,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)<br>**Tanks T10** - 30,000 gallon gasoline denaturant Volatile Organic Liquid Storage Tank (2004)<br>**Tank T12** - 489,000 gallon Volatile Organic Liquid Storage Tank (2017) | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Each storage tank shall be a fixed roof tank equipped with an internal floating roof. [ss. NR 406.10, NR 419.05(2), and NR 440.285(3)(a), Wis. Adm. Code, 40 CFR s. 60.112b(a)(1); 17-JJW-059]<br><br>(2) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it). The internal floating roof shall be floating on the liquid surface at all times except during initial fill and those times when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying or refilling shall be continuous and shall be accomplished as rapidly as possible. [ss. NR 406.10 and NR 440.285(3)(a)1.a., Wis. Adm. Code, 40 CFR s. 60.112b(1)(i); 17-JJW-059]<br><br>(3) Only ethanol or ethanol based (90% or more ethanol) mixtures may be stored in the tanks T01, T02, T03, T04, T11 and T12. [s. 285.65(7), Wis. Stats. and s. NR 406.10, Wis. Adm. Code; 17-JJW-059]<br><br>(4) Each storage tank shall be equipped with a fill pipe or line which feeds material into the tank below the floating roof. [s. 285.65(3), Wis. Stats. and s. NR 406.10, Wis. Adm. Code; 17-JJW-059]<br><br>(5) The internal floating roof shall be equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the floating roof. The lower seal may be vapor mounted, but both must be continuous. [ss. | (1) The permittee shall visually inspect the storage vessel with the seal in place before the initial fill of the volatile organic liquid. If there are any openings in the seals or other defects in the internal floating roof, the owner or operator shall repair these before filling the vessel. [s. NR 440.285(4)(a)1., Wis. Adm. Code, 40 CFR s. 60.113b(a)(1); 17-JJW-059]<br><br>(2) The permittee shall visually inspect the storage vessel internal floating roof and the primary seal through manholes and roof hatches on the fixed roof once every 12 months after the initial fill of the volatile organic liquid. If the internal floating roof is not resting on the surface of the Volatile Organic Liquid (VOL) inside the storage vessel, or there is liquid accumulated on the floating roof, or if the seal is detached or if there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required under this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Department in the inspection report required in s. NR 440.285(6)(a)3., Wis. Adm. Code. A request for an extension shall document that alternate storage capacity is unavailable and specify a schedule of actions the company owner or operator shall take to assure that the control equipment is repaired or the vessel will be emptied as soon as possible. [s. NR 440.285(4)(a)2., Wis. Adm. Code, 40 CFR s. 60.113b(a)(2); 17-JJW-059]<br><br>(3) Visually inspect the internal floating roof, the primary seal, or the secondary seal (if one is in | (1) <u>Reference Test Method for Volatile Organic Compound (VOC) Emissions:</u> Whenever VOC compliance testing is required, USEPA Method 18 or 25A shall be used. When approved in writing an equivalent test method may be substituted for the required test method. [s. NR 439.06(8), Wis. Adm. Code; 17-JJW-059]<br><br>(2) The permittee shall maintain a record of the volatile organic liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. The maximum true vapor pressure is the equilibrium partial pressure exerted by the VOL based upon the maximum local monthly average ambient temperature. [s. NR 440.285(7)(c), Wis. Adm. Code, 40 CFR s. 60.116b(c); 17-JJW-059]<br><br>(3) The permittee of each storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. The permittee shall also keep and maintain on site current "as built" technical drawings, blueprints or equivalent records of the storage tanks. These records shall be kept for the life of the vessel. [ss. NR 439.04, 440.285(7)(a) and (b), Wis. Adm. Code, 40 CFR s. 60.112b(b); 17-JJW-059]<br><br>(4) After installing the fixed roof, internal floating roof tank, the owner or operator shall meet the following requirements:<br>(a) Furnish the Department with a report that describes the control equipment and certifies that the control equipment meets the specifications of s. NR 440.285(3)(a)1. and (4)(a)1., Wis. Adm. Code. This report shall be an attachment of the notification required by s. NR 440.07(1)(c), Wis. Adm. Code.<br>(b) Keep a record of each inspection performed as required by I.O.1.b.(1)-(6). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof |

| **O. Tanks T02, T04** - 150,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)<br>**Tank T11** - 489,000 gallon Volatile Organic Liquid Storage Tank (2012)<br>**Tanks T01 and T03** - 80,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)<br>**Tanks T10** - 30,000 gallon gasoline denaturant Volatile Organic Liquid Storage Tank (2004)<br>**Tank T12** - 489,000 gallon Volatile Organic Liquid Storage Tank (2017) | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| NR 406.10, 440.285(3)(a)1.b.2), Wis. Adm. Code, 40 CFR s. 60.112b(1)(ii)(B); 17-JJW-059]<br><br>(6) Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum break vents) and the rim space vents is to provide a projection below the liquid surface. [s. NR 440.285(3)(a)1.c., Wis. Adm. Code, 40 CFR s. 60.112b(1)(iii); 17-JJW-059]<br><br>(7) Each opening in the internal floating roof, except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells and stub drains, is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. [s. NR 440.285(3)(a)1.d., Wis. Adm. Code, 40 CFR s. 60.112b(1)(iv); 17-JJW-059]<br><br>(8) Automatic bleeder vents (vacuum break vents) shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [s. NR 440.285(3)(a)1.e., Wis. Adm. Code, 40 CFR s. 60.112b(1)(v); 17-JJW-059]<br><br>(9) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [s. NR 440.285(3)(a)1.f., Wis. Adm. Code, 40 CFR s. 60.112b(1)(vi); 17- | service), gaskets, slotted membranes (if any), and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears or other openings in the seal or the seal fabric, the secondary seal has holes, tears or other openings in the seal or the seal fabric, the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10% open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event may inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels undergoing annual visual inspections.<br>[s. NR 440.285(4)(a)4., Wis. Adm. Code, 40 CFR s. 60.113b(4); 17-JJW-059]<br><br>(4) Notify the Department in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by b.(1) and (3) to afford the Department the opportunity to have an observer present. If the inspection required by (3) is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the storage vessel, the owner or operator shall notify the Department at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Department at least 7 days prior to the refilling. | and fittings).<br>(c) If any of the conditions described in I.O.1.b.(2) are detected during the annual inspection, a report shall be furnished to the Department within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects and the date the storage vessel was emptied or the nature of and the date the repair was made.<br>[s. NR 440.285(6)(a), Wis. Adm. Code, 40 CFR s. 60.115b(a); 17-JJW-059]<br><br>(5) The permittee shall keep and maintain all notifications to the Department regarding filling or refilling of each storage vessel. [s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059] |

| **O. Tanks T02, T04** - 150,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)<br>**Tank T11** - 489,000 gallon Volatile Organic Liquid Storage Tank (2012)<br>**Tanks T01 and T03** - 80,000 gallon each - Volatile Organic Liquid Storage Tanks (modified 2005)<br>**Tanks T10** - 30,000 gallon gasoline denaturant Volatile Organic Liquid Storage Tank (2004)<br>**Tank T12** - 489,000 gallon Volatile Organic Liquid Storage Tank (2017) | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| JJW-059]<br><br>(10) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90% of the opening. [s. NR 440.285(3)(a)1.g., Wis. Adm. Code, 40 CFR s. 60.112b(1)(vii); 17-JJW-059]<br><br>(11) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [s. NR 440.285(3)(a)1.h., Wis. Adm. Code, 40 CFR s. 60.112b(1)(viii); 17-JJW-059] | [s. NR 440.285(4)(a)5., Wis. Adm. Code, 40 CFR s. 60.113b(5); 17-JJW-059] | |

| **P.** Process F02 - Haul Roads | | |
|---|---|---|
| 1. Pollutant: Particulate Matter Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Minimization of fugitive dust emissions: No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. Nor may a person allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted or demolished without taking such precautions. [s. NR 415.04, Wis. Adm. Code; 04-DCF-295] | (1) The permittee shall clean and sweep the roads, scale as needed to prevent fugitive dust emissions. The 'road' areas of the facility shall be paved (e.g. hard surfaced: concrete or asphalt paving). [s. NR 415.04, Wis. Adm. Code; 04-DCF-295]<br><br>(2) The permittee shall take precautions to prevent particulate matter from becoming airborne.<br>(a) Such precautions shall include, but not be limited to:<br>(i) Use, where possible, of water or chemicals for control of dust in construction operations.<br>(ii) Application of asphalt, water, suitable chemicals or plastic covering on dirt or gravel roads, material stockpiles and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor or water pollution problem.<br>(iii) Installation and use of hoods, fans and air cleaning devices to enclose and vent the areas where dusty materials are handled.<br>(iv) Covering or securing of materials likely to become airborne while being moved on public roads or railroads.<br>(v) The paving or maintenance of roadway areas / haul roads so as not to create air pollution.<br>[s. NR 415.04, Wis. Adm. Code; 04-DCF-295]<br><br>(3) The facility shall update, maintain and follow a fugitive dust plan for control of fugitive dust emissions from the haul roads and grain handling areas. [s. NR 415.04, Wis. Adm. Code; 04-DCF-295] | (1) Reference Test Method for Visible (Fugitive Dust) emissions: Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 04-DCF-295]<br><br>(2) The permittee shall keep daily records of the road conditions, evaluations, cleaning and sweeping activities required under I.P.1.b.(1). [s. NR 439.04, Wis. Adm. Code; 04-DCF-295]<br><br>(3) Facility shall keep copies of the fugitive dust plan at the facility available for inspection by the Department and available for use by the process operators. [s. NR 439.04, Wis. Adm. Code]<br><br>(4) If using water or chemicals for dust control, the permittee shall record:<br>(a) The date and time of the water or chemical application, what was applied; and<br>(b) The area(s) at the facility where water or chemicals are applied.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 04-DCF-295] |

| **P.** Process F02 - Haul Roads | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Emissions may not exceed 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 04-DCF-295] | (1) The requirements in I.P.1.b. shall be used to show compliance with the visible emissions limitation. [s. 285.65(7), Wis. Stats.; 04-DCF-295] | (1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 04-DCF-295]<br><br>(2) Reference Test Method for Visible (Fugitive Dust) emissions: Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 04-DCF-295] |

| **Q.** Process F03, Stack S80, Control C80 - Truck Loading Rack 1<br>Process F06, Stack S80, Control C80 - Truck Loading Rack 2 | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) No person may cause, allow or permit emissions of volatile organic compounds to the ambient air which substantially contribute to the exceeding of an air standard or cause pollution. [s. NR 419.03(1), Wis. Adm. Code; 17-JJW-059]<br><br>(2) No transfer of products from this facility may be made to a tanker truck unless any gasoline or other organic vapors carried by the tanker are collected, processed and disposed of through a vapor collection, processing and disposal system (flare). [ss. NR 406.10, 419.03(2), 419.06(3), and 445.04(3), Wis. Adm. Code; 17-JJW-059]<br><br>(3)Toxics Lowest Achievable Emission Rate (TLAER). TLAER is determined to be the use of collection / capture of organic vapors displaced by the tanker truck loading operations and use of a flare to destroy at least 95% of these collected organic compounds. [ss. NR 445.07(1)(c), NR 440.18, Wis. Adm. Code; 17-JJW-059]<br><br>(4) The control device shall be designed and operated to reduce the inlet VOC emissions by 95% or greater. If an open flare is used as the control device it shall meet the specifications described in the general control device requirements under s. NR 440.18, Wis. Adm. Code. [s. 285.65(3), Wis. Stats. and s. NR 406.10, Wis. Adm. Code; 17-JJW-059] | (1) To demonstrate compliance with volatile organic compound emission limitations, the permittee shall conduct compliance emission testing whenever requested by the Department. [s. NR 439.06(3), Wis. Adm. Code; 17-JJW-059]<br><br>(2) To demonstrate compliance with gasoline/organic vapor collection system limitation, the permittee shall provide vapor collection/processing/disposal equipment at loading bays for all products distributed at this facility to ensure that any gasoline vapors are processed and disposed of through a vapor processing and disposal system. A vapor collection/control system shall be used at all times. [s. 285.65(3), Wis. Stats. and ss. NR 445.04(3), 407.09(4)(a)(3)(b), Wis. Adm. Code; 17-JJW-059]<br><br>(3) The facility shall install and maintain a transfer interlock system which allows for the transfer of materials to tanker trucks only when using a gasoline vapor collection/disposal system. Correct operation of the transfer interlock system shall be verified at least once each calendar month. [s. 285.65(3), Wis. Stats. and ss. NR 445.04(3), NR 407.09(4)(a)(3)(b), Wis. Adm. Code; 17-JJW-059]<br><br>(4) The owner or operator shall act to assure that loadings of gasoline tank trucks at the facility are made only into tanks equipped with vapor collection equipment that is compatible with the facility's vapor collection system. [ss. NR 407.09(1)(a) and NR 439.055(5), Wis. Adm. Code; 17-JJW-059]<br><br>(5) The flare shall be operated at all times when emissions may be vented to the flare. Flares shall be operated with a flame (pilot) present at all times. [ss. NR 440.18(3)(b)&(5), and NR 406.10, Wis. Adm. Code; 17-JJW-059]<br><br>(6) The flare shall be an air-assisted flare: This shall be designed and operated with an exit velocity less than the | (1) <u>Reference Test Method for Volatile Organic Compound (VOC) Emissions:</u> Whenever compliance emission testing is required, the appropriate U.S. EPA Method; 18 or 25A shall be used to demonstrate compliance. When approved in writing an equivalent test method may be substituted for the required test method. [s. NR 439.06(3)(a), Wis. Adm. Code; 17-JJW-059]<br><br>(2) The permittee shall keep and maintain the following daily records:<br>(a) A name or unique identifier for each specific material being transferred (loaded and unloaded) at the facility; and<br>(b) The quantity of each material transferred, in gallons.<br>[s. NR 419.06, Wis. Adm. Code; 17-JJW-059]<br><br>(3) The permittee shall keep and maintain the following records:<br>(a) Technical information regarding how the transfer interlock system operates;<br>(b) Verification logs regarding the correct operation of the transfer interlock system for each calendar month.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059]<br><br>(4) The permittee shall keep and maintain on site "as built" technical drawings, blueprints or equivalent records of the piping for the loading bay, the vapor processing equipment and a log of the tankers authorized to load ethanol at the facility. [s. 285.65(3), Wis. Stats., s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059] |

| **Q.** Process F03, Stack S80, Control C80 - Truck Loading Rack 1<br>Process F06, Stack S80, Control C80 - Truck Loading Rack 2 | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | specified $V_{max}$ as determined by the method specified under b.(8). [ss. NR 440.18(3), 406.10, Wis. Adm. Code; 17-JJW-059]<br><br>(7) The flare shall be used with a net heating value of the gas being combusted ($H_T$) of 300 BTU/scf (for an air assisted flare). The net heating value of the gas being combusted in a flare shall be calculated using the following equation:<br>$$H_T = K \cdot \sum_{i=1}^{n} C_i H_i$$<br>where:<br>$H_T$ is the net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 700 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C;<br>$K$ is the conversion constant, $1.740 \times 10^{-7}$<br>$$\left[\frac{1}{ppm}\right] \cdot \left[\frac{g-mole}{scm}\right] \cdot \left[\frac{MJ}{kcal}\right]$$<br>where the standard temperature for (g-mole)/scm is 20°C;<br>$C_i$ is the concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 440.17, and measured for hydrogen and carbon monoxide by ASTM D1946-77, incorporated by reference in s. NR 440.17; and<br>$H_i$ is the net heat of combustion of sample component i, kcal/(g-mole) at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76, incorporated by reference in s. NR 440.17, if published values are not available or cannot be calculated.<br>[ss. NR 440.18(6)(c) and NR 406.10, Wis. Adm. Code; 17-JJW-059]<br><br>(8) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined as appropriate by Reference Method 2, 2A, 2C, or 2D of Appendix A, 40 CFR | |

| **Q.** Process F03, Stack S80, Control C80 - Truck Loading Rack 1<br>Process F06, Stack S80, Control C80 - Truck Loading Rack 2 | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | Part 60, incorporated by reference in s. NR 440.17, by the unobstructed (free) cross sectional area of the flare tip. [ss. NR 440.18(6)(d) and NR 406.10, Wis. Adm. Code; 17-JJW-059]<br><br>(9) The maximum permitted velocity, $V_{max}$, for air-assisted flares shall be determined by the following equation:<br>$V_{max} = 8.706 + 0.7084(H_T)$<br>where:<br>$V_{max}$ is the maximum permitted velocity, m/sec;<br>*8.706* is a constant;<br>*0.7084* is a constant; and<br>$H_T$ is the net heating value as determined in (5).<br>[ss. NR 440.18(6)(f) and NR 406.10, Wis. Adm. Code; 17-JJW-059] | |

| **Q.** Process F03, Stack S80, Control C80 - Truck Loading Rack 1<br>Process F06, Stack S80, Control C80 - Truck Loading Rack 2 | | |
|---|---|---|
| 2. Pollutant: Visible Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) No visible opacity from flares except for periods not to exceed 5 minutes during any 2 consecutive hours. [ss. NR 431.05(1), 440.18(3)(a), Wis. Adm. Code; 17-JJW-059] | (1) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [ss. NR 431.05(1), 440.18(3)(a), Wis. Adm. Code; 17-JJW-059]<br><br>(2) The requirements in I.Q.1.b. shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 17-JJW-059] | (1) <u>Reference Test Method for Visible Emissions:</u> Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 17-JJW-059]<br><br>(2) Whenever visible emissions compliance testing for the flare is required, USEPA Method 22 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. The observation period is 2 hours and shall be used in accordance with Method 22. [s. NR 440.18(6), Wis. Adm. Code; 17-JJW-059]<br><br>(3) See I.Q.1.c. [s. NR 439.04(1)(d), Wis. Adm. Code] |

| **R.** Process F05 - Wet Cake Storage Building | | |
|---|---|---|
| 1. Pollutant: Volatile Organic Compound (VOC) Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) Latest Available Control Techniques and operating practices (LACT). LACT is use of a storage building / enclosure and implementation of an odor prevention and abatement plan. [s. NR 424.03(2)(c), Wis. Adm. Code; 04-DCF-295]<br><br>(2) This facility may not be equipped with a dryer used to dry or heat wet cake (e.g. DDGS dryer) and may only be equipped with a single wet cake storage building with dimensions as outlined within the facility permit application. [s. NR 406.10, Wis. Adm. Code; 04-DCF-295] | (1) The permittee shall implement an odor prevention and abatement plan. [ss. NR 424.03(2)(c) and NR 429.03, Wis. Adm. Code; 04-DCF-295]*<br><br>(2) The plan shall contain provisions requiring that the wet cake be held within an enclosure (building) when stored. [s. NR 429.03, Wis. Adm. Code; 04-DCF-295]*<br><br>(3) Refer to I.R.2 for the plan requirements, additional compliance demonstration and recordkeeping requirements. [s. NR 439.04(1)(d), Wis. Adm. Code] | (1) Reference Test Method for Volatile Organic Compound (VOC) Emissions: Whenever VOC compliance testing is required, USEPA Method 18 or 25A shall be used. When approved in writing, an equivalent test method may be substituted for the required test method. [s. NR 439.06(8), Wis. Adm. Code; 04-DCF-295]<br><br>(2) Refer to I.R.2 for the plan requirements, additional compliance demonstration and recordkeeping requirements. [s. NR 439.04(1)(d), Wis. Adm. Code] |

| **R.** Process F05 - Wet Cake Storage Building | | |
|---|---|---|
| 2. Pollutant: Malodorous Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) General Limitations. No person may allow or permit emissions into the ambient air any substance or combination of substances in such quantities that an objectionable odor is determined to result unless preventative measures satisfactory to the Department are taken to abate or control such emission. [s. NR 429.03(1), Wis. Adm. Code; 04-DCF-295]*<br><br>(2) This facility may not be equipped with a dryer used to dry or heat wet cake and may only be equipped with a single wet cake storage building with dimensions as outlined within the facility permit application. [s. NR 406.10, Wis. Adm. Code; 04-DCF-295]* | (1) The permittee shall implement an odor prevention and abatement plan.[13] [s. NR 429.03, Wis. Adm. Code; 04-DCF-295]*<br><br>(2) The plan shall be revised and updated as needed to correct any deficiencies that may develop. The Department may amend the plan. [s. NR 429.03, Wis. Adm. Code; 04-DCF-295]*<br><br>(3) The plan shall contain provisions requiring that the wet cake be held within an enclosure (building) when stored. [s. NR 429.03, Wis. Adm. Code; 04-DCF-295]*<br><br>(4) If objectionable odors are determined to exist/persist as a result of the wet/spent grain storage, the facility shall propose additional means | (1) OBJECTIONABLE ODOR TESTS. An odor shall be deemed objectionable (malodorous) when either or both of the following tests are met:<br>(a) Upon decision resulting from investigation by the Department, based upon the nature, intensity, frequency, and duration of the odor as well as the type of area involved and other pertinent factors.<br>(b) Or when 60% of a random sample of persons exposed to the odor in their place of residence or employment, other than employment at the odor source, claims it to be objectionable and the nature, intensity, frequency, and duration of the odor are considered.<br>[s. NR 429.03(2), Wis. Adm. Code; 04-DCF-295]*<br><br>(2) The facility shall maintain a daily record of the noon time temperature measured at the facility and records of how the wet cake is being managed (e.g. internal storage, daily records of wet |

[13] This plan shall contain provisions that wet cake will not be held for more than 72 hours whenever the noon time temperatures are consistently above 45° F and the other elements of the plan proposed by the facility in their permit applications and the odor abatement plan. Operational procedures, housekeeping details, use of first-in/first out, use of food grade preservatives, etc. shall be incorporated into the plan.

| **R.** Process F05 - Wet Cake Storage Building | | |
|---|---|---|
| 2. Pollutant: Malodorous Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | of odor control by amending the odor prevention and abatement plan proposing additional actions/controls needed to minimize the odors. The Department may amend the plan. [s. NR 429.03, Wis. Adm. Code; 04-DCF-295]* | cake produced and wet cake shipped). [s. NR 439.04, Wis. Adm. Code; 04-DCF-295]*<br><br>(3) Facility shall maintain additional records and the procedures necessary to assure compliance with the odor prevention and abatement plan and shall incorporate these into the plan (e.g. use of food grade preservatives). [s. NR 439.04, Wis. Adm. Code; 04-DCF-295]*<br><br>(4) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the wet cake enclosure / building. [s. NR 439.04(1)(d), Wis. Adm. Code; 04-DCF-295]* |

| **Z.** General Conditions Applicable to the Construction Permit. | |
|---|---|
| **1.** Construction Permit Transitional Language | |
| **a.** Limitations/Condition | **b.** Compliance Demonstration |
| (1) Modified Emission Unit(s). The conditions related to the modification of existing emission units or existing facility requirements shall take effect upon issuance of the construction permit. [s. 285.65(1) Wis. Stats. (Permit 17-JJW-059)]<br><br>(2) New Emission Unit(s). Once constructed and initially operating, new emission units shall operate under the applicable conditions of the construction permit 17-JJW-059. [s. 285.65(1) Wis. Stats. (Permit 17-JJW-059)] | (1) Compliance Reports/Records. The permittee shall submit periodic monitoring reports and certification of compliance as required by I.ZZZ.3.a.(1) and (2) for any modified and new emission unit for the period when that unit becomes operational. Note that compliance monitoring and reporting requirements and limitations of any unmodified units remain in effect. [s. NR 407.05(9), Wis. Adm. Code (Permit 17-JJW-059)]<br><br>(2) Completion of Operation Permit Application. The permittee shall update the permit application if any changes occur which are not specified or described in the plans and specifications approved under construction permit 17-JJW-059. [s. NR 407.05(9), Wis. Adm. Code (Permit 17-JJW-059)]<br><br>(3) Submittal of Compliance Testing Information and Other Updates. The permittee shall submit to the department any updates of the permit application. Updates are required if any changes that occur which are not specified or described in the plans and specifications dated March 30, 2017. The updates shall be made within 60 days of the date of the change. Other information to be submitted shall include the notification requirements and stack tests results and the update of the facility's Malfunction prevention and Abatement Plan. The continued operation of the modified and new emission units addressed in this construction permit are prohibited once the authorization to construct expires per I.Z.4.a.(2), unless any required updates have been submitted and the permittee has satisfied the notification requirements of I.Z.4.b.(1)[14]. [s. NR 439.04(1)(d), Wis. Adm. Code (Permit 17-JJW-059)]<br><br>(4) All submittals described in this permit shall be made in writing and include the name of the facility, the facility's address, the construction permit number and a description of the affected emission unit(s). [s. NR 439.04(1)(d), Wis. Adm. Code (Permit 17-JJW-059)] |

[14] To maintain the operation permit shield.

| Z. General Conditions Applicable to the Construction Permit. | |
|---|---|
| **2.** Updated Malfunction Prevention and Abatement Plan | |
| **a.** Limitations | **b.** Compliance Demonstration |
| (1) Malfunction Prevention and Abatement Plan. The permittee shall update the Malfunction Prevention and Abatement Plan to prevent, detect and correct malfunctions or equipment failures which may cause any applicable emission limitation to be violated or which may cause air pollution with the modified emission unit(s). [s. NR 439.11, Wis. Adm. Code (Permit 17-JJW-059)] | (1) Malfunction Prevention and Abatement Plan. A Malfunction, Prevention, and Abatement Plan shall be developed in accordance with condition II.F. [s. NR 439.11(1), Wis. Adm. Code (Permit 17-JJW-059)] |

| Z. General Conditions Applicable to the Construction Permit. | |
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| **3.** Initial Stack Testing Requirements | |
| **a.** Limitations | **b.** Compliance Demonstration |
| (1) Emission Stack Testing. The permittee shall conduct a compliance emission stack test of the following emission units within 90 days of the start of operation of fermenters Process P44J and P44K:<br>• Stack S40 – Compliance with the VOC emission limit and the 85% control requirement.<br>• Stack S50 – Compliance with the VOC emission limit and the 85% control requirement.<br>(a) If compliance emission test(s) cannot be conducted within the time frames specified, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).<br>(b) 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.<br>(c) The Department shall be notified at least 20 business days in advance of a compliance emission test, to provide the Department an opportunity to have a representative present to witness the testing procedures. The notification shall include submission of a test plan. Any alternative test methods require prior approval in writing. The notification and test plan shall be submitted to the Department of Natural Resources Northeast Region Air Program, Oshkosh Service Center, 625 E. County Road Y, Suite 700, Oshkosh, WI 54901-9731 or an alternative address provided by the Department. Alternatively, the Department accepts and encourages electronic submittals of test plans, uploaded through the permittee's Web Access Management System (WAMS) ID. For more details refer to the "Stack Testing Electronic Submittal Guidebook" on the DNR website.<br>[s. NR 439.07, Wis. Adm. Code (Permit 17-JJW-059)] | (1) Emission Stack Testing. Upon completion of any required compliance emission tests of the modified emission units and the new emission units, the permittee shall submit two copies of the report on the tests for evaluation within 60 days of the date the tests were completed. The emission test report shall be submitted to the Department of Natural Resources Northeast Region Air Program, Oshkosh Service Center, 625 E. County Road Y, Suite 700, Oshkosh, WI 54901-9731 or an alternative address provided by the Department. Alternatively, the Department accepts and encourages electronic submittals of test reports, uploaded through the permittee's Web Access Management System (WAMS) ID. For more details refer to the "Stack Testing Electronic Submittal Guidebook" on the DNR website. [s. NR 439.04(1)(d), Wis. Adm. Code (Permit 17-JJW-059)] |

| Z. General Conditions Applicable to the Construction Permit. | |
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| **4.** Construction Permit Notification and Authorization | |
| **a.** Limitations | **b.** Compliance Demonstration |
| (1) Notifications. The permittee shall inform the Department of the following dates:<br>(a) The date construction commences on any new or modified emission unit(s) addressed in | (1) Notifications. The permittee shall submit to the Department of Natural Resources Northeast Region Air Program, Oshkosh Service Center, 625 E. County |

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|---|---|
| Permit 17-JJW-059.<br>(b) The date the modified emission unit(s) becomes operational.<br>(c) The date new emission unit(s) becomes operational.<br>For purposes of this permit, "operational" shall be defined as the first time of any process related air contaminant is emitted into the ambient air.<br>[s. NR 439.03(1), Wis. Adm. Code (Permit 17-JJW-059)]<br><br>(2) Construction Authorization Expiration. The Authorization to Construct, under Construction Permit 17-JJW-059 expires 18 months after the date of issuance. Construction or modification and an initial operation period for equipment shakedown, testing and Department evaluation of operation to assure conformity with the permit conditions is authorized for each emissions unit covered in this permit. Please note that the sources covered by this permit are required to meet all emission limits and conditions contained in the permit at all times, including during the initial operation period. If 18 months is an insufficient time period for construction or modification, equipment shakedown, testing and Department evaluation of operation, the permit holder may request and the Department may approve in writing an extension of this permit. The conditions of the construction permit are permanent, unless revised, superseded or revoked. [ss. 285.60(1)(a)2. and 285.66(1), Wis. Stats.; s. NR 406.12, Wis. Adm. Code (Permit 17-JJW-059)]<br><br>(3) Operation Permit Authorization. The emission units authorized in 17-JJW-059 may only operate under the operation permit if both of the following are met:<br>(a) The emission units are constructed in accordance with the application as approved by the department, and<br>(b) The construction and/or modification of the emission units is completed prior to expiration of the authority provided by the construction permit 17-JJW-059 to construct, modify, replace and/or reconstruct these emission units.<br>[ss. NR 406.10, and 406.12, Wis. Adm. Code, and s. 285.65, Wis. Stats., Permit 17-JJW-059] | Road Y, Suite 700, Oshkosh, WI 54901-9731 or an alternative address provided by the Department, in writing, within 15 days of the date the event, the following:<br>(a) The date construction commences on the new or modified emission unit(s) addressed in Permit 17-JJW-059.<br>(b) The date the modified emission unit(s) becomes operational.<br>(c) The date new emission unit(s) becomes operational.<br>[s. NR 439.04(1)(d), Wis. Adm. Code (Permit 17-JJW-059)] |

| **ZZZ. Conditions Applicable to the Entire Facility** | | |
|---|---|---|
| 1. Pollutant: Malodorous Emissions | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (1) General Limitations. No person may allow or permit emissions into the ambient air any substance or combination of substances in such quantities that an objectionable odor is determined to result unless preventative measures satisfactory to the Department are taken to abate or control such emission. [s. NR 429.03(1), Wis. Adm. Code; 17-JJW-059]* | (1) The permittee shall prepare and implement an Odor Prevention and Abatement Plan. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]*<br><br>(2) The Odor Prevention and Abatement Plan shall include a process to document and investigate complaints related to malodorous emissions. The permittee shall investigate each complaint related to malodorous emissions as expeditiously as practicable. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]*<br><br>(3) If malodorous emissions are determined to exist or persist as a result of process operations, the facility shall propose additional means of odor control by amending the Odor Prevention and Abatement Plan and proposing the actions or controls needed to minimize the odors. The facility shall implement the additional measures to reduce odors as expeditiously as practicable. [s. NR 429.03, Wis. Adm. Code; 17-JJW-059]* | (1) The facility shall keep and maintain the following records:<br>(a) A record of all complaints related to malodorous emissions. The record shall include the date, time, and name of the complainant.<br>(b) A record of the results of each investigation related to a malodorous emissions complaint.<br>(c) The most recent version of the Odor Prevention and Abatement Plan.<br>[s. NR 439.04(1)(d), Wis. Adm. Code; 17-JJW-059]* |

| **ZZZ. Conditions Applicable to the Entire Facility** | | |
|---|---|---|
| 2. Pollutant: State Hazardous Air Pollutants (State HAPs) | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| (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)]* | (1) 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]*<br><br>(2) The permittee shall determine if the facility's new or increased potential emission rate of any State HAP exceeds the applicable published de-minimus value in Table A of s. NR 445.07, Wis. Adm. Code. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]* | (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]* |

| ZZZ. Conditions Applicable to the Entire Facility | | |
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| 2. Pollutant: State Hazardous Air Pollutants (State HAPs) | | |
| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
| | (3) 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]* | |

| ZZZ. Conditions Applicable to the Entire Facility | |
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| 3. Pollutant: Malfunction Prevention and Abatement Plan | |
| **a.** Limitations/Conditions | **b.** Compliance Demonstration |
| (1) A Malfunction Prevention and Abatement Plan shall be prepared and followed for the plant. [s. NR 439.11, Wis. Adm. Code]<br><br>(2) The permittee shall maintain a written copy of the Malfunction Prevention and Abatement Plan at the facility and update the plan at least once every five years. The plan shall contain all of the elements in s. NR 439.11(1)(a) through (h), Wis. Adm. Code. [s. NR 439.11, Wis. Adm. Code] | None Applicable |

| ZZZ. Conditions Applicable to the Entire Facility | |
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| 4. Pollutant: Stack Testing Requirements | |
| **a.** Limitations/Conditions | **b.** Compliance Demonstration |
| (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]<br><br>(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]<br><br>(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, Northeast Region Air Program, Oshkosh Service Center. [s. NR 439.07(2), Wis. Adm. Code] | (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] |

| ZZZ. Conditions Applicable to the Entire Facility | |
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| 5. Pollutant: Compliance Reports / Records | |
| **a.** Limitations/Conditions | **b.** Compliance Demonstration |
| (1) The permittee shall submit periodic monitoring reports. [s. NR | (1) The permittee shall submit a monitoring report which contains the results of monitoring or a summary |

| ZZZ. Conditions Applicable to the Entire Facility | |
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| 5. Pollutant: Compliance Reports / Records | |
| **a.** Limitations/Conditions | **b.** Compliance Demonstration |
| 407.09(1)(c)3., Wis. Adm. Code]<br><br>(2) The permittee shall submit a periodic certification of compliance. [s. NR 407.09(4)(a)3., Wis. Adm. Code]<br><br>(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] | of monitoring results required by this permit to the Department every six (6) months. Alternatively, the Department accepts and encourages electronic submittals of monitoring reports, uploaded through the permittee's Web Access Management System (WAMS) ID.<br>(a) The time periods to be addressed by the submittal January 1 to June 30 and July 1 to December 31.<br>(b) The report shall be submitted to the Wisconsin Department of Natural Resources, Oshkosh Area Office, 625 E. County Road Y, Suite 700, Oshkosh, WI 54901 by March 1st and September 1st after the end of each reporting period.<br>(c) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.<br>(d) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report.<br>(e) The content of the submittal is described in item D. of Part II of the operation permit.<br>[ss. NR 407.09(1)(c)3. & NR 439.03(1)(b), Wis. Adm. Code]<br><br>(2) The permittee shall submit an annual certification of compliance with the requirements of this permit to the Wisconsin Department of Natural Resources, Oshkosh Area Office, 625 E. County Road Y, Suite 700, Oshkosh, WI 54901. Alternatively, the Department accepts and encourages electronic submittals of certification of compliance, uploaded through the permittee's Web Access Management System (WAMS) ID.<br>(a) The time period to be addressed by the report is January 1 to December 31 of the preceding year.<br>(b) The report shall be submitted to the Wisconsin Department of Natural Resources by March 1st after the end of each reporting period.<br>(c) The information included in the report shall comply with the requirements of Part II, Section N of this permit.<br>(d) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report.<br>[ss. NR 407.09(4)(a)3. & NR 439.03(1)(c), Wis. Adm. Code] |

| ZZZ. Conditions Applicable to the Entire Facility |
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| 6. Pollutant: Compliance Assurance Monitoring Requirements for Processes P20, P22, P25 and P26 |
| **a.** Limitations |
| (1) Operation of Approved Monitoring<br>(a) *Proper Maintenance:* At all times the permittee shall maintain the monitoring required by I.A.1.b.(8) and I.B.1.b.(8) including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.<br>(b) *Continued Operation:* Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emission unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of 40 CFR Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.<br>(c) *Response to Excursions or Exceedances:*<br>(i) Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture |

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

6. Pollutant: Compliance Assurance Monitoring Requirements for Processes P20, P22, P25 and P26

**a.** Limitations

system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range designated condition.

(ii) Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(e) *Documentation of Need for Improved Monitoring:* If the permittee identifies a failure to achieve compliance with the particulate matter emission limitations outlined in I.A.1.a.(1) and (2), and I.B.1.a.(1) and (2) for which the CAM requirements outlined in Conditions I.A.1.b.(8) and I.B.1.b.(8) did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges, the permittee shall notify the Department, and if necessary, submit a proposed revision to this operation permit to address the necessary monitoring changes. Such a revision may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
[s. 285.65(13), Wis. Stats. 40 CFR s. 64.7]

(2) Quality Improvement Plan (QIP) Requirements

(a) Based on the results of a determination made under I.ZZZ.6.a.(1)(c)(ii), the permittee shall develop and implement a QIP if the required monitoring shows exceedances or excursions in excess of the applicable QIP thresholds specified in I.A.1.b.(8)(d) and I.B.1.b.(8)(d).

(b) *Elements of a QIP:*

(i) The permittee shall maintain the QIP in writing and have it available for inspection.

(ii) The plan initially shall include procedures for evaluating the control performance problems and, based in the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate: (1) improved preventive maintenance practices, (2) process operation changes, (3) appropriate improvements to control methods, (4) other steps appropriate to correct control performance, (5) more frequent or improved monitoring (only in conjunction with one or more of steps (1) through (4)).

(c) If a QIP is required, the permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the Department if the period of completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(d) Following implementation of a QIP, upon any subsequent determination pursuant to I.ZZZ.6.a.(1)(c)(ii) the Department may require that the permittee make reasonable changes to the QIP, if the QIP is found to have:

(i) failed to address the cause of the control device performance problems; or,

(ii) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(e) Implementation of a QIP shall not excuse the permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirements that applies under federal, state, or local law, or any other applicable requirement of the Clean Air Act.
[s. 285.65(13), Wis. Stats., 40 CFR s. 64.8]

(3)(a) The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR s. 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(b) Instead of paper records, the permittee may maintain records on alternative formats, provided that the use of such alternative format allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.
[s. 285.65(13), Wis. Stats., 40 CFR s. 64.9(b)]

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

7. Pollutant: Stack Parameters

| **a.** Limitations | **b.** Compliance Demonstration | **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements |
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| (1) The stacks listed in I.ZZZ.7.a.(2) may not be equipped with a device which impedes the upward flow of the exhaust gases. [s. 285.65(3), Wis. Stats., ss. NR 406.10, NR 404.04(8), and NR 404.05(3), Wis. Adm. Code; 16-JJW-075]<br><br>(2) Stack heights for each individual stack must be at least the following heights above ground level set forth in the table below. Any changes or differences from the parameters noted which result in higher ambient impacts, may not result in a violation of an ambient standard, increment or an acceptable air concentration value and shall be documented in a submittal to the Department (if a discrepancy is observed). The Department may approve the changes or deny them if the changes may result in a violation of a standard, increment or acceptable air concentration. [s. 285.65(3), Wis. Stats. and s. NR 406.10, Wis. Adm. Code; 06-JJW-281, 04-DCF-295; 16-JJW-075; 17-JJW-059] | (1) Whenever requested in writing by the Department, the permittee shall provide current physical stack parameters. [s. NR 407.09(4)(a), Wis. Adm. Code; 16-JJW-075] | (1) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [ss. NR 439.04(1)(d), and 407.09(1)(c)2., Wis. Adm. Code; 16-JJW-075] |

| Source | Height (ft) |
|---|---|
| S20 | 26.5 |
| S21 | 16.5 |
| S31A, S33A | 26.5 |
| S35A, S36A | 32.33 |
| S95 | 18.65 |
| S62, S63 | 90.5 |
| S64 | 10 |
| S90, S91 | 13.5 |
| S70, S71 | 65.0 |