AIR POLLUTION CONTROL OPERATION PERMIT REVISION

EI FACILITY NO:	128006120	OPERATION PERMIT REVISION NO: 128006120-F31	
TYPE: Minor Rev	ision of operation	permit 128006120-F30	
In compliance with the	ne provisions of C	hapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,	
Name of Source:	•	sconsin (UW) - Whitewater tment of Administration (DOA)	
Street Address:	734 Lauderdale I Whitewater, Jeffe	Orive, erson County, Wisconsin	
Responsible Officia	al & Title: John	n Klenke, DFD Administrator, DOA	
	Jam	es W. Freer, Vice Chancellor of Administrative Affairs, UW - Whitewater	
		ver (heating) plant and university as described in the plans and specifications 0, 2017 in conformity with the conditions herein.	
	t for cause under s	and remains effective unless revised, suspended or revoked. The Department s. NR 407.14(1m)(f), Wis. Adm. Code, to establish an expiring term. [s. NR	
	the construction p	nated in a construction permit are permanent and may only be revised permit condition, revision of a construction permit, or through the issuance of), Wis. Stats.]	
		h an asterisk (*) have been created outside of the Wisconsin's federally (IP) and are not federally enforceable.	
This authorization real		by the permit holder with the emission limitations, monitoring requirements in all Parts hereof.	
Dated at Green Bay,	Wisconsin	March 29, 2017	
STATE OF WISCON	ISIN		
DEPARTMENT OF NATURAL RESOURCES For the Secretary			
Rv	/s/ Pichard V	Vulk	

Richard Wulk

Air Management Supervisor

PREAMBLE TO OPERATION PERMIT

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

Historical Summary of Permits/Orders Issued to the Facility.

Permit/Order/Exemption Number	Issued/Approved	Sources covered and desc. ¹	Permit Adopted/Renewed/ Revised/Incorporated
128006120-P01	12/03/1996	Total Facility – Initial Title V operation permit as a major, part 70 source.	Renewed by 128006120-P10
128006120-P10	06/30/2003	Total Facility – Renewal of the facility's operation permit as a major, part 70 source.	Renewed by 128006120-F20
08-SSS-134	10/07/2008	Boiler B26 – Authorized the installation of a 150 MMBtu/hr boiler. The rating of the boiler installed is 142.7 MMBtu/hr.	Adopted by 128006120-F20
128006120-F20	10/07/2008	Total Facility – Renewal of the facility's operation permit as a synthetic minor non-part 70 (SM80) source. The permit also adopted the construction permit for boiler B26	Revised by 128006120-F21
09-SSS-097	06/16/2009	Boiler B22 and Generator P31 – Authorized the reinstallation of a 62.5 MMBtu/hr boiler and the installation of a new 500 kW standby diesel generator. The boilerplate rating of the boiler is 69.3 MMBtu/hr.	Adopted by 128006120-F21
128006120-F21	06/16/2009	Total Facility – Adopted the construction permit for boiler B22 and generator P31.	Revised by 128006120-F23 and/or renewed by 128006120-F30
128006120-F22	12/21/2009	Total Facility – Revised the permit to make the facility a synthetic minor non-part 70 (non-SM80) source.	Revised by 128006120-F23 and/or renewed by 128006120-F30
16-TAZ-029	July 11, 2016	Boilers B22 and Stack S11 – Implements after-the-fact changes to have the heat input rating for boiler B22 reflect its boilerplate rating and to change	Adopted by 128006120-F30

Permit/Order/Exemption Number	Issued/Approved	Sources covered and desc. ¹	Permit Adopted/Renewed/ Revised/Incorporated
		parameters for stack S11 (reduce its stack height).	
128006120-F23	July 11, 2016	Boilers B20, B21, B22 and B26 – Places restrictions on the types of fuels burned by the boilers and is updating (revising) the NSPS requirements for boiler B26.	Renewed by 128006120-F30
128006120-F30	July 11, 2016	Total Facility – Renewal of the facility's operation permit as a synthetic minor non-part 70 (non-SM80) source.	Adopted by 128006120-F31
128006120-F31	March 29, 2017	Total Facility- add fuel nitrogen content limits for Boiler B26	Primary Enforcement Document

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

Stack and Process Index.

Wisconsin Department of Administration (DOA)

AA. Boiler B20, Stack S10 – 56.3 MMBtu/hr Industrial Boiler

Boiler B20 is one of two industrial, watertube, stoker boilers equipped with natural gas sidewall burners. Boiler B20, formerly a vibrating stoker boiler, burned coal and was authorized to burn wood and paper pellets. The boiler no longer has the capability to burn solid fuels. The boiler is restricted to burning only natural gas. The boiler was installed in 1965 (before there was a construction permit program) with a rated heat input capacity of 56.3 million Btu per hour. The gas train for the boiler was repaired in 1996. There is no determination that the boiler was modified. Boiler B20, along with boiler B21 and B22, exhaust into the ambient air utilizing stack S10. Stack S10 is a 175-foot, unobstructed stack. The emissions from Boiler B20 are emitted uncontrolled.

Boiler B21, Stack S10 – 56.3 MMBtu/hr Industrial Boiler

Boiler B21 is the second of two industrial, watertube, stoker boilers equipped with natural gas sidewall burners. Boiler B21, formerly a vibrating stoker boiler, burned coal and was authorized to burn wood and paper pellets. The boiler no longer has the capability to burn solid fuels. The boiler is restricted to burning only natural gas. The boiler was installed in 1965 (before there was a construction permit program) with a rated heat input capacity of 56.3 million Btu per hour. The gas train for the boiler was repaired in 1996. There is no determination that the boiler was modified. Boiler B21, along with boiler B20 and B22, exhaust into the ambient air utilizing stack S10. Stack S10 is a 175-foot, unobstructed stack. The emissions from Boiler B21 are emitted uncontrolled.

AB. Boiler B22, Stack S10 – 69.3 MMBtu/hr Industrial Boiler

Boiler B22 is an industrial, watertube steam boiler. Boiler B22 is restricted to burning natural gas and distillate fuel oil. The boiler was originally installed in 1970 (before there was a construction permit program) with a heat input rating of 69.3 million Btu per hour (boilerplate rating). The boiler's removal was required under construction permit 08-SSS-134. The removal requirement under construction 08-SSS-134 was revised (repealed) under construction permit 09-SSS-097. Construction permit 09-SSS-097 also authorized the boiler to use (burn) yellow grease, beef tallow and biodiesel, as alternative fuels. The

continued operation of the boiler and the option to burn alternative fuels were considered a modification under the NSR program, but not a modification under the NSPS program. The alternative fuels are no longer burned by the boiler. Boiler B22, along with boilers B20 and B21, exhaust into the ambient air using stack S10. The boiler can also utilize stack S11. The option to use stack S11 is being permanently blocked. Stack S10 is a 175-foot, unobstructed stack. The emissions from Boiler B22 are emitted uncontrolled. Construction permit 16-TAZ-29, an after-the-fact permit, is increasing the boiler's stated heat input rating from 62.5 to 69.3 million Btu per hour to reflect the boilerplate rating of the boiler.

AC. Boiler B26, Stack S11 – 142.7 MMBtu/hr Industrial Boiler

Boiler B26 is an industrial, package steam boiler. Boiler B26 is restricted to burning natural gas and distillate fuel oil. The boiler was installed in 2008 under construction permit 08-SSS-134 with a rated heat input capacity of 142.7 million Btu per hour (boilerplate rating). A 150 MMBtu/hr boiler was authorized under the construction permit. Construction permit 08-SSS-134 also authorized the use (burning) of yellow grease, beef tallow and biodiesel, as alternative fuels. The permittee has elected to discontinue the use of alternative fuels, to restrict the sulfur content of the distillate fuel oil burned, and to limit the boiler's annual capacity factor to reduce NSPS monitoring and reporting requirements. Boiler B26 exhausts into the ambient air utilizing stack S11. Stack S11 is a 58-foot, unobstructed stack. The emissions from Boiler B26 are emitted uncontrolled. Construction permit 16-TAZ-29, an after-the-fact permit, is revising the parameters for stack S11 (authorize a 58-foot height and a 6-foot diameter).

AD. Process P31, Stack S31 – One (1) Power Plant Standby Diesel Generator (installed after June 12, 2006 and manufactured after 2007).

Process P31 operates as a 500 kW (670 HP) emergency generator. The generator is restricted to burning distillate fuel oil with a maximum fuel consumption rate of 112 gallons per hour. The sulfur content of the distillate fuel oil burned is restricted to 0.05 % sulfur by weight (500 ppmw). The NSPS requires the generator burn ultralow sulfur oil (15 ppmw sulfur). The generator was installed in 2010 under construction permit 08-SSS-134. The generator exhausts into the ambient air utilizing stack S31. Stack S31 is a 15-foot, unobstructed stack. The emissions from the generator are emitted uncontrolled.

<u>Size</u>	<u>Make</u>	Manufacture Date	<u>Location</u>
500 kW (670 HP)	Doosan	2009	Power Plant

University of Wisconsin (UW)

BA. Process B99A, Stack S99A – Four (4) Campus Diesel-Fired Emergency Generators (installed before June 12, 2006).

Process P99A represents the diesel-fired emergency backup electric power generators installed before June 12, 2006, and under the control of the university. There are four (4) generators in this classification. The units vary in size and dates of installation. The emissions from the generators are emitted uncontrolled from dedicated exhaust stacks. Stack S99A represents a composite exhaust stack for the generators. The generators, because they operate as emergency generators, are exempt from needing a construction permit for their installations.

<u>Size</u>	<u>Make</u>	Manufacture Date	Location
25 kW (34 HP)	Kohler	1988	General Services
105 kW (141 HP)	Kohler	2003 or before	McGraw
105 kW (141 HP)	Energy Now	2000	Upham
210 kW (281 HP)	Kohler	2003 or before	Wells

BB. Process B99B, Stack S99B – One (1) Campus Diesel-Fired Emergency Generator s (installed after June 12, 2006 and equipped with an engine manufactured before 2007).

Process P99B represents the diesel-fired emergency backup electric power generator installed after June 12, 2006, manufactured before model year 2007 (but after April 1, 2006), and under the control of the university. There is one (1) generator in this classification. The unit is rated at 134 kw (180 HP). The generator was installed in 2008. The engine associated with the generator was manufactured in 2006. Stack S99B represents the exhaust stack for the generator. The generator, because it operates as an emergency generator, is exempt from needing a construction permit for its installation.

<u>Size</u> <u>Make</u> <u>Manufacture Date</u> <u>Location</u> 134 kW (180 HP) Cummins August 17, 2006 University Center

BC. Process B99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (installed after June 12, 2006 and equipped with an engine manufactured in 2007 and rated < 50 HP)

Process P99C represents the diesel-fired emergency backup electric power generators installed after June 12, 2006, manufactured in 2007, rated at < 50 HP, and under the control of the university. There is one (1) generator in this classification. The unit is rated at 15 kW (20 HP). The engine associated with the generator was manufactured in 2007. Stack S99C represents the exhaust stack for the generator. The generator, because it operates as an emergency generator, is exempt from needing a construction permit for its installation.

<u>Size</u> <u>Make</u> <u>Manufacture Date</u> <u>Location</u> 15 kW (20 HP) Generac 2007 Clem

BD. Process B99D, Stack S99D – One (1) Campus Diesel-Fired Emergency Generator (installed after June 12, 2006 and equipped with an engine manufactured in 2008 or later and rated < 50 HP)

Process P99D represents the diesel-fired emergency backup electric power generator installed after June 12, 2006, manufactured in 2008 or later, rated at < 50 HP, and under the control of the university. There is one (1) generator in this classification. The unit is rated at 26 kW (35 HP). The engine associated with the generator was manufactured in 2008. Stack S99D represents the exhaust stack for the generator. The generator, because it operates as an emergency generator, is exempt from needing a construction permit for its installation.

<u>Size</u> <u>Make</u> <u>Manufacture Date</u> <u>Location</u> 26 kW (35 HP) Kohler 2008 Moraine

BE. Process B99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated $50 \le HP \le 3000$)

Process P99E represents the diesel-fired emergency backup electric power generators installed after June 12, 2006, manufactured in 2007 or later, rated at \geq 50 HP and \leq 3000 HP, and under the control of the university. There are eight (8) generators in this classification. The units vary in size and dates of manufacture. The engines associated with the generators were manufactured in 2007 or later. Stack S99E represents a composite exhaust stack for the generators. The generators, because they operate as emergency generators, are exempt from needing a construction permit for their installations.

Size	<u>Make</u>	Manufacture Date	Location
200 kW (268 HP)	Generac	2012	Laurentide
180 kW(241 HP)	Kohler	2009	McGraw
85 kW (114 HP)	Cummins	2012	Winther
240 kW (322 HP)	Cummins	2009	Starin
50 kW (67 HP)	Generac	2007	Benson
80 kW (107 HP)	Generac	2007	Lee
184 kW(247 HP)	Generac	2013	Goodhue
80 kW (107 HP)	Generac	2007	Knilans

BF. Process B99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (installed before June 12, 2006)

Process P99F represents the gas-fired emergency backup electric power generators installed before June 12, 2006 located on the campus, and under the control of the university. There are six (6) generators in this classification. The units vary in size and dates of manufacture. All units are equipped with rich-burn engines that burn natural gas. The emissions from the generators are emitted uncontrolled from dedicated exhaust stacks. Stack S99F represents a composite exhaust stack for the generators. The generators, because they were either installed before there was a construction permit program (before 1980) or installed when there was a construction permit program and operate as exempt emergency generators, were installed without construction permits.

<u>Size</u>	<u>Make</u>	Manufacture Date	Location
20 kW (27 HP)	Onan	1971	Ambrose
35 kW (47 HP)	Kohler	2004	Andersen
15 kW (20 HP)	Kohler	1965	Heide
39 kW (52 HP)	Kohler	1999	Hyer
60 kW (80 HP)	Onan	1999	Williams Center
15 kW (20 HP)	Kohler	1963	Esker

BG. Process B99G, Stack S99G – Two (2) Campus Natural Gas-Fired Emergency Generators (installed after June 12, 2006 and equipped with engines manufactured before January 1, 2009)

Process P99G represents the gas-fired emergency backup electric power generators installed after June 12, 2006, manufactured before 2009, and under the control of the university. There are two (2) generators in this classification. The units vary in size and dates of manufacture. All units are equipped with rich-burn engines that burn natural gas. Stack S99G represents a composite exhaust stack for the generators. The generators, because they operate as emergency generators, are exempt from needing a construction permit for their installations.

<u>Size</u>	<u>Make</u>	Manufacture Date	Location
230 kW (308 HP)	Generac	2007	Hyland
20 kW (27 HP)	Cummins	2008	Roseman

BH. Process B99H Stack S99H – One (1) Campus Natural Gas-Fired Emergency Generators (Equipped with an engine manufactured on or after January 1, 2009 and rated 25 < HP < 100 and)

Process P99H represents the diesel-fired emergency backup electric power generators installed after June 12, 2006, manufactured in 2009 or later, rated at > 25 HP and < 100 HP, and under the control of the university. There is one (1) generator in this classification. The unit is rated at 45 kW (60 HP). The generator is equipped with a rich-burn engine that burns natural gas. Stack S99H is the exhaust stack for the generator. The generator, because it operates as an emergency generator, is exempt from needing a construction permit for its installation.

<u>Size</u>	<u>Make</u>	Manufacture Date	<u>Location</u>
45 kW (60 HP)	Kohler	2012	Center of the Arts

BI. Process B99I Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated \geq 130 HP)

Process P99I represents the diesel-fired emergency backup electric power generators installed after June 12, 2006, manufactured in 2009 or later, rated at \geq 130 HP, and under the control of the university. There are four (4) generators in this classification. The units vary in size and dates of manufacture. The generators are equipped with a rich-burn engines that burn natural gas. Stack S99I is a composite the exhaust stack for the generators. The generators, because they operate as emergency generators, are exempt from needing a construction permit for their installations.

Size	<u>Make</u>	Manufacture Date	Location
100 kW (134 HP)	Generac	2011	Fischer
125 kW (168 HP)	Generac	2015	Fricker
100 kW (134 HP)	Generac	2012	Wellers
150 kW (201 HP)	Kohler	2012	Drumlin

Insignificant Emissions Units.

Maintenance of Grounds, Equipment, and Buildings

Boiler, Turbine, and HVAC System Maintenance

Pollution Control Equipment Maintenance

Internal Combustion Engines Used for Warehousing and Material Transport

Fire Control Equipment

Janitorial Services

Office Activities

Convenience Water Heating

Convenience Space Heating (< 5 MMBTU/hr Burning Gas, Liquid, or Wood)

Fuel Oil Storage Tank (<10,000 gallon)

Demineralization and Oxygen Scavenging of Water for Boilers

Purging of Natural Gas Lines

Sanitary Sewer and Plumbing Venting

Gasoline and Distillate Storage Tanks for Various Campus Operations

21 Emergency generators

Kilns Used in Arts/Ceramics

Laboratory Hoods Used in Science/Art Laboratories

Photographic Exhaust Used in Art/Physics Photographic Laboratories

Swimming Pool/Chlorine Used in Physical Education Classes

Forge Used in Sculpture Laboratory

Welding Used in Maintenance and Sculpture Art Classes

Acid Etching Tank 2 by 2 used in Jewelry Marking Laboratory

Paint Spray Booths Used in Maintenance and Art Laboratory

Wood Dust Collection System Used in Maintenance and Art Laboratories

Dip Tank/Parts Washing Used in Maintenance Operations

Printing Shop Used for Test/Forms General Printing Items

Kitchen Fume Hoods Used in Cooking /Dishwashing Operations

Oven/Stoves Natural Gas and Electric Used in Cooking and Baking

Foundry (Natural Gas) Used in Sculpture to Mel Aluminum for Small Castings

Local exhaust Band Instrument Repair

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 in section I.B. and I.C. 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. For example: citation of 95-JB-062-P10 would indicate that that condition, which originated from construction permit # 95-JB-062, was revised and the analysis for the revision is included with the review documents for operation permit 123456780-P10.

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 – Wisconsin Department of Administration (DOA) Index

Section AA	56.3 MMBtu/hr Gas-Fired Industrial Boiler (Natural Gas) - Installed in 1965 (B20, S10)
	56.3 MMBtu/hr Gas-Fired Industrial Boiler (Natural Gas) - Installed in 1965 (B21, S10)
Section AB	69.3 MMBtu/hr Gas/Oil-Fired Industrial Boiler (Natural Gas and Distillate Fuel Oil) – Installed in 1970 (B22, S10)
Section AC	142.7 MMBtu/hr Gas/Oil-Fired Industrial Boiler (Natural Gas and Distillate Fuel Oil) – Installed in 1970 (B26, S11)
Section AD	One (1) Power Plant Diesel-Fired Standby Emergency Generator – Equipped with an engine manufactured in 2009 (P31, S31)

Part I

AA. B20/S10 and B21/S10 - Two (2) 56.3 MMBtu/hr Natural Gas Fired Industrial Boilers (Installed 1965)						
1. Pollutant: Particulate Matter	1. Pollutant: Particulate Matter					
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements				
(1) Emissions may not exceed 0.60 pounds per million Btu heat input, from any stack. [s. NR 415.06(1)(a), Wis. Adm. Code]	(1) The permittee may only fire natural gas in boilers B20 and B21. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The permittee shall keep documentation (records) that shows boilers B20 and B21 are capable of burning (or burns) only natural gas. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d)., Wis. Adm. Code]				
(2) Emissions of particulate matter PM ₁₀ from stack S10 may not exceed 2.10 lb/hr. ¹ [s. 285.65(3), Wis. Stats., and ss. NR 404.04(8) and NR 415.03, Wis. Adm. Code]	 (2) Stack S10 shall have the parameters listed below: (a) The stack diameter at the outlet may not exceed 7.0 feet, (b) The stack height shall be at least 175 feet above the ground level, and (c) The stack may not be equipped with any rainhat or other device that may impede the upward velocity of the exhaust gas. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] 	(2) The facility shall maintain on site plans and specifications, technical drawings, blueprints or equivalent records of the physical stack parameters including the following: (a) Stack height, (b) Stack inside diameter, and (c) Stack exit design. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]				

The estimated potential emission rate for particulate matter PM_{10} (2.10 lb/hr) is calculated using AP-42 emission factors for the fuels allowed and the maximum heat input ratings for boilers B20, B21 and B22. The air quality standards for particulate matter PM_{10} are protected as long as the emission rate from stack S10 does not exceed 2.1 lb/hr and the parameters for stack S10 do not change. Compliance with specified emission limit is achieved by restricting the types of fuels burned by the affected boilers and specifying the critical stack parameters for stack S10.

AA. B20/S10 and B21/S10 - Two (2) 56.3 MMBtu/hr Natural Gas Fired Industrial Boilers (Installed 1965)		
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emissions may not exceed 40% opacity or number 2 on the Ringlemann chart with the following exceptions: (a) When combustion equipment is being cleaned or a new fire started, emissions may exceed number 1 of the Ringlemann chart or 20% opacity but may not exceed number 4 of the Ringlemann chart or 80 percent opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. (b) Emissions may exceed number 1 of the Ringlemann chart or 20% opacity for stated periods of time, as permitted by the Department, for such purposes as an operating test, use of emergency equipment, or other good cause, provided no hazard or unsafe condition arises. [ss. NR 431.04(1) and NR 431.05 (1) and (2), Wis. Adm. Code] 	(1) The permittee may only fire natural gas in boilers B20 and B21. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] ²	(1) The permittee shall keep documentation (records) that shows boilers B20 and B21 are capable of burning (or burns) only natural gas. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d)., Wis. Adm. Code]

² Natural gas is a clean burning fuel. The visible emission limitation of 40% opacity is not expected to be exceeded while firing natural gas. Therefore restricting the types of fuel to only natural gas is adequate to ensure compliance with the visible emission limitation.

B22/S10 - One (1) 69.3 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Industrial Boiler (Installed in 1970, Reinstalled/Modified in 2009) AB. 1. Pollutant: Particulate Matter c. Reference Test Methods, Recordkeeping and Monitoring Requirements **a.** Limitations **b.** Compliance Demonstration (1) The permittee may only fire (1) The permittee shall keep and have available for inspection documentation (records) (1) Emissions may not exceed 0.15 pounds per million Btu natural gas and distillate fuel oil in that shows boiler B22 is capable of burning (or burns) only natural gas and distillate fuel heat input from any stack. [ss. Boiler B22. [s. 285.65(3), Wis. oil. [ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Stats., and ss. NR 406.11 and NR NR 407.09(2)(d), NR Code (09-SSS-097-F23)] 415.06(2)(a) and NR 407.09 (2)(d) and (4)(a)3.b., Wis. 407.09(2)(d), Wis. Adm. Code Adm. Code (09-SSS-097-F23)] (2) The facility shall maintain on site plans and specifications, technical drawings, blueprints or equivalent records of the physical stack parameters including the following: (09-SSS-097)] (2) Stack S10 shall have the (2) Emissions of particulate parameters listed below: (a) Stack height, matter PM₁₀ from stack S10 (b) Stack inside diameter, may not exceed 2.10 lb/hr. ³ [s. (b) The stack diameter at the (c) Stack exit design, and 285.65(3), Wis. Stats., and ss. (d) Connection to stack S11 is permanently blocked. outlet may not exceed 7.0 feet, NR 404.04(8) and NR 415.03, (b) The stack height shall be at least 175 feet above the ground Wis. Adm. Code (16-TAZ-[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (16-TAZ-029)] level, and 029)] (c) The stack may not be equipped with any rainhat or other (3) The emissions from boiler B22 shall exhaust into the device that may impede the ambient air using stack S10. [s. upward velocity of the exhaust 285.65 (7), Wis. Stats. (16gas. TAZ-029)] [s. 285.65(3), Wis. Stats., and s. NR 407.09 (2)(d) and (4)(a)3.b.. Wis. Adm. Code (09-SSS-097)]

³ Construction permit 16-TAZ-029 is revising (replacing) the PM emission limit established in 09-SSS-097 for boiler B22. The revised emission limit for stack S10 is set at slightly above the combined $PM_{10}MTE$ rate for boilers B20, B21 and B22 (2.10 lb/hr vs. 2.01 lb/hr). The combined emission rate is calculated using AP-42 emission factors, the boilers' maximum heat input ratings, and assuming the worse fuel burned. The emission rate limit, when modelled, demonstrated the air standards for PM_{10} are protected. Stack S10 is not increment consuming. Compliance with specified emission limit is achieved by restricting the types of fuels burned by the affected boilers and specifying the critical stack parameters for stack S10.

AB. B22/S10 – One (1) 69.3 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Industrial Boiler (Installed in 1970, Reinstalled/Modified in 2009)		
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emissions may not exceed 20% opacity or number 1 on the Ringlemann chart with the following exceptions: (a) When combustion equipment is being cleaned or a new fire started, emissions may exceed number 1 of the Ringlemann chart or 20% opacity but may not exceed number 4 of the Ringlemann chart or 80 percent opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. (b) Emissions may exceed number 1 of the Ringlemann chart or 20% opacity for stated periods of time, as permitted by the Department, for such purposes as an operating test, use of emergency equipment, or other good cause, provided no hazard or unsafe condition arises. [ss. NR 407.09(2)(d) and NR 431.05 (1) and (2), Wis. Adm. Code (09-SSS-097)] 	(1) The permittee may only fire natural gas and distillate fuel oil in Boiler B22. ⁴ [s. 285.65(3), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (09-SSS-097-F23)]	(1) The permittee shall keep documentation (records) that shows boiler B22 is capable of burning (or burns) only natural gas and distillate fuel oil. [ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (09-SSS-097-F23)]

⁴ Natural gas and distillate fuel oil are clean burning fuels. The visible emission limitation of 20% opacity is not expected to be exceeded while firing natural gas and distillate fuel oil. Therefore restricting the types of fuel to only natural gas and distillate fuel oil is adequate to ensure compliance with the visible emission limitation.

AB. B22/S10 – One (1) 6	AB. B22/S10 - One (1) 69.3 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Industrial Boiler (Installed in 1970, Reinstalled/Modified in 2009)			
3. Pollutant: Sulfur Dioxide				
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements		
(1) Emissions of sulfur	(1) The permittee may only fire natural	(1) The permittee shall keep documentation (records) that shows boiler B22 is capable of		
dioxide from stack S10	gas and distillate fuel oil in Boiler B22.	burning (or burns) only natural gas and distillate fuel oil. [ss. NR 406.11, NR 407.09		
may not exceed 3.60 lb/hr. ⁵	[s. 285.65(3), Wis. Stats., and ss. NR	(2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (09-SSS-097-F23)]		
[s. 285.65(3), Wis. Stats	406.11 and NR 407.09 (2)(d) and			
and s. NR 404.04(2), Wis.	(4)(a)3.b., Wis. Adm. Code (NR	(2) The permit shall keep a record for each shipment of distillate fuel oil received the		
Adm. Code (16-TAZ-029)]	406.11, 09-SSS-097-F23)]	following;		
	(2) The distillate fuel oil burned in this	(a) The date of the shipment,		
	boiler may not contain more than 0.05	(b) The volume of the shipment, and		
	percent by weight (500 ppmw) sulfur.	(c) The sulfur content of the fuel oil.		
	[s. 285.65 (3) and (7), Wis. Stats., and			
	s. NR 407.09(4)(a)3.b., Wis. Adm.	The numeric sulfur content of the fuel oil received is not necessary as long as the fuel		
	Code (09-SSS-097)]	supplier certifies the oil provided is at or below 0.05 weight percent sulfur		
		(documentation showing the fuel oil received is ultralow sulfur fuel oil is sufficient). [ss.		
	(3) The permittee shall determine the	NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (09-		
	sulfur content of each shipment of	SSS-097-F23)]		
	distillate fuel oil received either			
	analytically or using the supplier's	(3) The facility shall maintain on site plans and specifications, technical drawings,		
	certificate of analysis (or an equivalent form of documentation). [s. NR	blueprints or equivalent records of the physical stack parameters including the following:		
	407.09(4)(a)3.b., Wis. Adm. Code]	(a) Stack height,		
		(b) Stack inside diameter,		
	(4) Stack S10 shall have the parameters	(c) Stack exit design, and		
	listed below:	(d) Connection to stack S11 is permanently blocked.		
	(a) The stack diameter at the outlet may not exceed 7.0 feet,	[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (16-TAZ-029)]		
	(b) The stack height shall be at least			
	175 feet above the ground level, and			
	(c) The stack may not be equipped with			
	any rainhat or other device that may			
	impede the upward velocity of the			

⁵ Construction permit 16-TAZ-029 is revising the SO₂ emission limit established in 09-SSS-097 for boiler B22. The revised emission limit for stack S10 is set at the combined SO₂ MTE rate for boilers B20, B21 and B22 (3.60 lb/hr). The combined emission rate is calculated using AP-42 emission factors, the boilers' maximum heat input ratings, the worse fuels burned, and a sulfur content limit of 0.05% by weight sulfur. The emission rate limit, when modelled, demonstrated the air standards for SO₂ are protected. Stack S10 is not increment consuming. Compliance with specified emission limit is achieved by restricting the types of fuels burned by the affected boilers, the sulfur content of the distillate oil burned, and specifying the critical stack parameters for stack S10.

AB. B22/S10 – One (1) 6	AB. B22/S10 – One (1) 69.3 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Industrial Boiler (Installed in 1970, Reinstalled/Modified in 2009)			
3. Pollutant: Sulfur Dioxide	3. Pollutant: Sulfur Dioxide			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements		
	exhaust gas.			
	[s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (16-TAZ-029)]			

AB. B22/S10 – One (1) 69.3 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Industrial Boiler (Installed in 1970, Reinstalled/Modified in 2009)

4. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources [40 CFR part 63, subpart JJJJJJ] - Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations

(1) Operating Restriction. A gas-fired boiler, as defined in 40 CFR §63.11237, is not subject to 40 CFR part 63, subpart JJJJJ and any requirements in this subpart. Pursuant to 40 CFR §63.11237, a "gas-fired boiler" includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 CFR §63.11195(e) and s. 285.65(13), Wis. Stats. (GACT)]

b. Compliance Demonstration

- (1) Operating Restriction. The permittee shall identify the types of fuels burned and track the hours of operation for each boiler while burning a liquid fuel (e.g., distillate oil, residual oil, biodiesel, vegetable oil, ...). The permittee shall classify the hours of operation while burning a liquid fuel as either occurring during a period of gas curtailment, gas supply interruption, boiler startup, periodic (readiness) testing, or other event (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]
- (2) <u>Operating Restriction</u>. At the end of each month, the permittee shall determine the following for each boiler:
- (a) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing for the just completed month; and
- (b) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing year-to-date for the just completed calendar month.
- [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]
- (3) <u>Subcategory Change</u>. For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within 40 CFR part 63, subpart JJJJJJ, you must demonstrate compliance

- c. Reference Test Methods, Recordkeeping and Monitoring Requirements
- (1) <u>Recordkeeping</u>. The permittee shall maintain and have available records of the following items for each boiler:
- (a) The types of fuels burned by each boiler.
- (b) The hours of operation, including the classifications of these hours (purpose of use);
- (c) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing for each calendar month; and
- (d) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing year-to-date for each calendar month.

If the monthly year-to-date total hours of operation while burning a liquid fuel used for periodic (readiness) testing exceeds 48 hours or the boiler while burning a liquid fuel is operated for other than periods of gas curtailment, gas supply interruption, startups, or periodic (readiness) testing, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. ⁶ [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

- (2) <u>Subcategory Change Reporting</u>. If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within subpart JJJJJJ, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the change. The notification must identify:
- (a) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched

⁶ Operating a boiler while burning a liquid back-up fuel for more than 48 hours in a calendar year for periodic (readiness) testing or operating a boiler while burning a liquid back-up fuel for unapproved periods of operation may result in the boiler being reclassified as a "oil subcategory" boiler.

AB. B22/S10 – One (1) 69.3 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Industrial Boiler (Installed in 1970, Reinstalled/Modified in 2009)		
4. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources [40 CFR part 63, subpart JJJJJJ] - Federal Hazardous Air Pollutants (Federal HAP)		
a. Limitations b. Compliance Demonstration c. Reference Test Methods, Recordkeeping and Monitoring Requirements		
	within 180 days of the effective date of the fuel switch or the physical change. Notification of such changes must be submitted according to 40 CFR §63.11225(g). [40 CFR §63.11210(h), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	fuels, or were physically changed, and the date of the notice. (b) The date upon which the fuel switch or physical change occurred. [40 CFR §63.11225(g), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)			
1. Pollutant: Particulate Matter			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
(1) Emissions may not exceed 0.15 pounds per million Btu heat input, from any stack. [ss. NR 407.09(2)(d) and NR 415.06(2)(a), Wis. Adm. Code (08-SSS-134)]	(1) The permittee may only fire natural gas and distillate fuel oil in Boiler B26. [s. 285.65(3), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (NR 406.11, 08-SSS-134-F23)]	(1) The permittee shall keep documentation (records) that shows boiler B26 is capable of burning (or burns) only natural gas and distillate fuel oil. [ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (09-SSS-097-F23)]	
(2) Emissions of particulate matter PM ₁₀ from stack S11 may not exceed 2.16 pounds per hour, averaged over any 24-hour period. ⁷ [s. 285.65(3), Wis. Stats., and ss. NR 404.04(8) and NR 404.05(3), Wis. Adm. Code (16-TAZ-029)] (3) An owner or operator of an affected facility	(2) The permittee shall limit the usage of distillate fuel oil by boiler B26 to no more than 19,650 gallons over any 24-hour period. [s. 285.65 (3) and (7), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (16-TAZ-029)]	(2) The permittee shall track and record the time and the amount of oil burned each day when oil is burned. If the total time duration oil is burned exceeds or is scheduled to exceed 19 hours in any 24-hour period 9, the permittee shall record hourly the total amount of oil burned over the preceding 24-hour period starting on hour 19 and continuing until the boiler ceases to burn oil. [ss. NR 407.09(4)(a)1. and	
that commences construction, reconstruction, or modification after February 28, 2005, and	(3) Stack S11 shall have the parameters listed below:	NR 439.04(1)(d), Wis. Adm. Code (16-TAZ-029)]	
that combusts only oil that contains no more than 0.30 weight percent sulfur in combination with other fuels not subject to a PM standard under 40 CFR §60.43b (natural gas) and not using a post-combustion technology (except a	(c) The stack diameter at the outlet may not exceed 6.0 feet,(b) The stack height shall be at least 58 feet above the ground level, and	(3) The facility shall maintain on site plans and specifications, technical drawings, blueprints or equivalent records of the physical stack parameters including the following:	
wet scrubber) to reduce PM or SO ₂ emissions is not subject to the PM limit in 40 CFR §60.43b(h)(1). ⁸ [40 CFR §60.43b(h)(5) and s. 285.65(13), Wis. Stats. (NSPS)]	(c) The stack may not be equipped with any rainhat or other device that may impede the upward velocity of the exhaust gas.	(a) Stack height,(b) Stack inside diameter, and(c) Stack exit design.	
, , , , , , , , , , , , , , , , , , ,	[s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (16-TAZ-	[ss. NR 407.09 (2)(d) and (4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134)]	

⁷ Construction permit 16-TAZ-029 is replacing the PM emission limit established in 08-SSS-134 for stack S11 with an emission limit for PM₁₀. The emission limit for PM₁₀, on a 24-hour basis, ensures the increment consumed by stack S11 (boiler B26) is below the applicable air standard. Stack S11 is increment consuming. The applicable emission rate is calculated using AP-42 emission factors and assuming the boiler is operating at capacity at all time and burning the worse emitting fuels over a 24-hour basis. The boiler's oil usage is limited to no more than 19,650 gallons over any 24-hour period to meet this limit. Compliance with the emission limit is achieved by restricting the types of fuels burned by the boiler, limiting the amount of oil burned, and specifying the critical stack parameters for stack S11.

⁸ The boiler is not subject to a PM emission limit under the NSPS (subpart Db) because the boiler is restricted to burning only oil and natural gas and the oil burned is restricted to having sulfur content of less than 0.30 weight percent sulfur (See 40 CFR §60.43b(h)(5)). Condition I.C.3.a.(2) of the permit restricts the oil burned by boiler B26 to "very low sulfur oil", which by definition contains less than 0.30 weight percent sulfur. Construction permit 16-TAZ-029 also restricts the fuel oil burned to no more than 0.046 weight percent sulfur.

⁹ Boiler B26 needs to operate for more than 19 hours at maximum capacity to burn the equivalent of 19,650 gallons of distillate fuel oil. By burning no more than 19,650 gallons of oil in a 24-hour period, the boiler does not have the capability to exceed the average PM₁₀ emission rate limit specified in the permit.

Pollutant: Particulate Matter		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(4) The owner or operator of an affected facility seeking to demonstrate compliance with the Pm emission limit in 40 CFR \$60.43b(h)(5) shall follow the applicable procedures under 40 CFR \$60.49b(r). Under 40 CFR \$60.49b(r)(1), the owner or operator shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in 40 CFR \$60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. [40 CFR \$\$60.46b(i) and 60.49b(r)(1), s. 285.65(13), Wis. Stats., s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	(4) The permittee shall keep, maintain, and have available upon request a fuel supplier certification, which contains the information described in condition I.AC.1.b.(4), for each shipment of oil received for boiler B26. [ss. NR 407.09(4)(a)1.a. and NR 439.04(1)(d), Wis. Adm. Code]

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)

2. Pollutant: Visible Emissions

a. Limitations

- (1) Emissions may not exceed 20% opacity or number 1 on the Ringlemann chart with the following exceptions:
- (a) When combustion equipment is being cleaned or a new fire started, emissions may exceed number 1 of the Ringlemann chart or 20% opacity but may not exceed number 4 of the Ringlemann chart or 80 percent opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day.
- (b) Emissions may exceed number 1 of the Ringlemann chart or 20% opacity for stated periods of time, as permitted by the Department, for such purposes as an operating test, use of emergency equipment, or other good cause, provided no hazard or unsafe condition arises.
- [ss. NR 407.09(2)(d) and NR 431.05 (1) and (2), Wis. Adm. Code (08-SSS-134)]
- (2) No owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels ¹⁰ with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent

b. Compliance Demonstration

- (1) The permittee may only fire natural gas and distillate fuel oil in Boiler B26. ¹¹ [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]
- (2) To determine compliance with the opacity limits under 40 CFR §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under 40 CFR §60.8, and shall conduct subsequent performance tests as requested by the Administrator (See condition I.C.2.c.(2) of this permit), using Method 9 of appendix A of 40 CFR part 60 for determining the opacity of stack emissions. [40 CFR §60.46b(d)(7), s. 285.65 (3) and (13), Wis. Stats., and ss. NR 406.11 and s. NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134-F23, NSPS)]
- (3) The owner or operator of an affected facility is not required to install or operate a COMS if the affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO₂ emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO₂ or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under 40 CFR §60.49b(r). Under 40 CFR §60.49b(r)(1), the

- **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
- (1) The permittee shall keep daily records of:
- (a) Type of fuel used; and
- (b) The time when the type of fuel used is switched.

[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

- (2) The owner or operator of an affected facility subject to an opacity standard under 40 CFR \$60.43b and meeting the conditions under paragraphs (j)(2) of 40 CFR \$60.48b who elects not to use a COMS 12 shall conduct a performance test using Method 9 of appendix A-4 of 40 CFR part 60 and the procedures in 40 CFR \$60.11 to demonstrate compliance with the applicable limit in 40 CFR \$60.43b within 45 days of stopping use of an existing COMS and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of 40 CFR \$60.48b (paragraphs (a), (b) or (c), below). The observation period for Method 9 of appendix A-4 of 40 CFR part 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.
- (a) Except as provided in paragraph (a)(2) and (a)(3) of 40 CFR §60.48b (paragraphs (b) and (c), below), the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of 40 CFR §60.48b

¹⁰ The opacity limits under the NSPS (40 CFR part 60, subpart Db) applies only when boiler B26 is burning oil.

¹¹ Natural gas and distillate fuel oil are clean burning fuels. The visible emission limitation of 20% opacity is not expected to be exceeded while firing natural gas and distillate fuel oil. Therefore restricting the types of fuel to only natural gas and distillate fuel oil is adequate to ensure compliance with the visible emission limitation.

¹² A COMS for measuring opacity is not required under 40 CFR \$60.48b(j)(2) because boiler B26 only burns natural gas and distillate fuel oil, the sulfur content of the oil burned is restricted to no more than 0.05 weight permit sulfur (which is approximately equivalent to 0.050 lb SO₂ per million Btu of heat input) in this permit, the boiler is not equipped with post-combustion technology to reduce the boiler's PM and SO₂ emissions, and the fuel recordkeeping records for sulfur content under 40 CFR \$60.49(r) are specified in this permit.

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)		
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
opacity. The opacity standard applies at all times, except during periods of startup, shutdown, or malfunction. [40 CFR §60.43b (f) and (g), 285.65(13), Wis. Stats., and NR 407.09(2)(d), Wis. Adm. Code (08-SSS-134)]	owner or operator shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in 40 CFR §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. [40 CFR §§ 60.48b(j)(2) and 60.49b(r)(1), s. 285.65(13), Wis. Stats., and ss. NR 406.11 and s. NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134-F23, NSPS)]	according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of 40 CFR §60.48b (paragraphs (i) through (iv), below), as determined by the most recent Method 9 of appendix A-4 of 40 CFR part 60 performance test results. (i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of 40 CFR part 60 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; (ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of 40 CFR part 60 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; (iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of 40 CFR part 60 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or (iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of 40 CFR part 60 performance test must be completed within 45 calendar days from the date that the most recent performance test must be completed within 45 calendar days from the date that the most recent performance test must be completed within 45 calendar days from the date that the most recent performance test must be completed within 45 calendar days from the date that the most recent performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

AC. B26/S11 – One (1) 142.7 MMBtu/hr N	atural Gas/Distillate Fuel Oil Fired Boiler (I	(installed in 2008)
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
a. Limitations	b. Compliance Demonstration	
		 (a) of this section within 45 calendar days according to the requirements in §60.46d(d)(7). (ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable,
		observations can be reduced to once every 7

AC. B26/S11 – One (1) 142.7 MMBtu/hr Na	ntural Gas/Distillate Fuel Oil Fired Boiler (I	nstalled in 2008)
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
		operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.
		(c) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.
		[40 CFR §60.48b(a), s. 285.65 (13), Wis. Stats., and ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23, NSPS)]
		(3) For an affected facility subject to the opacity standard in 40 CFR §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in

AC. B26/S11 – One (1) 142.7 MMBtu/hr	Natural Gas/Distillate Fuel Oil Fired Boiler (l	Installed in 2008)
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
		40 CFR §60.48b(a) shall maintain records according to the requirements specified in paragraphs (f)(1) through (3) of 40 CFR §60.49b (paragraphs (a) through (c), below), as applicable to the visible emissions monitoring method used.
		(a) For each performance test conducted using Method 9 of appendix A-4 of 40 CFR part 60, the owner or operator shall keep the records including the information specified in paragraphs (f)(1)(i) through (iii) of 40 CFR §60.49b (paragraphs (i) through (iii), below).
		 (i) Dates and time intervals of all opacity observation periods; (ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and (iii) Copies of all visible emission observer opacity field data sheets;
		(b) For each performance test conducted using Method 22 of appendix A-4 of 40 CFR part 60, the owner or operator shall keep the records including the information specified in paragraphs (f)(2)(i) through (iv) of 40 CFR §60.49b (paragraphs (i) through (iv), below).
		 (i) Dates and time intervals of all visible emissions observation periods; (ii) Name and affiliation for each visible emission observer participating in the performance test; (iii) Copies of all visible emission observer opacity field data sheets; and (iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to

AC. B26/S11 – One (1) 142.7 MMBtu/hr N	atural Gas/Distillate Fuel Oil Fired Boiler (I	installed in 2008)
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
		demonstrate compliance with the applicable monitoring requirements.
		(c) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.
		[40 CFR §60.49b(f), s. 285.65 (13), Wis. Stats., and ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23, NSPS)]
		(4) The owner or operator of any affected facility subject to the opacity standards in 40 CFR \$60.43b(f) is required to submit excess emission reports for any excess emissions that occurred during the reporting period. For the purpose of 40 CFR \$60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR \$60.43b(f). [40 CFR \$60.49b(h) (1) and (3), s. 285.65 (13), Wis. Stats., and ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23, NSPS)]
		(5) The owner or operator of an affected facility may submit electronic quarterly reports for opacity in lieu of submitting the written reports required under paragraph (h) of 40 CFR §60.49b. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)			
2. Pollutant: Visible Emissions			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
		the permitting authority to obtain their agreement to submit reports in this alternative format. [40 CFR §60.49b(v), s. 285.65 (13), Wis. Stats., and ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23, NSPS)] (6) The reporting period for the reports required under 40 CFR 60, Subpart Db is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period. [40 CFR §60.49b(w), s. 285.65 (13), Wis. Stats., and ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23, NSPS)] (7) The permittee shall keep, maintain, and have available upon request a fuel supplier certification, which contains the information described in condition I.AC.2.b.(3), for each shipment of oil received for boiler B26. [ss. NR 407.09(4)(a)1.a. and NR 439.04(1)(d), Wis. Adm. Code]	

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)		
3. Pollutant: Sulfur Dioxide		
a. Limitations-	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions of sulfur dioxide from the stack S11 may not exceed 6.66 lb/hr ¹³ [s. 285.65(3), Wis. Stats., and ss. NR 404.04(2), 404.05(3), and NR 407.09(2)(d), Wis. Adm. Code (08-SSS-134)]	(1) The permittee may only fire natural gas and distillate fuel oil in boiler B26. [s. 285.65(3), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134-F23)]	(1) The permittee shall keep documentation (records) that shows boiler B26 is capable of burning (or burns) only natural gas and distillate fuel oil. [ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23)]
(2) The boiler shall burn only natural gas or very low sulfur oil. ¹⁴ [40 CFR §§ 60.41b and 60.42b(k)(2), s. 285.65(13), Wis. Stats., ss. NR 406.11, and NR 407.09(2)(d), Wis. Adm. Code (08-SSS-134-F23, NSPS)]	(2) The distillate fuel oil burned in this boiler may not contain more than 0.046 percent by weight (460 ppmw) sulfur. [s. 285.65 (3) and (7), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (16-TAZ-029)]	(2) The permit shall keep a record for each shipment of distillate fuel oil the following;(a) The date of the shipment,(b) The volume of the shipment, and(c) The sulfur content of the fuel oil.
	(3) The permittee shall determine the sulfur content of each shipment of distillate fuel oil received either analytically or using the supplier's certificate of analysis (or an equivalent form of documentation). [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (4) Stack S11 shall have the parameters listed below:	The numeric sulfur content of the fuel oil received is not necessary as long as the fuel supplier certifies the oil provided is at or below 0.046 weight percent sulfur (documentation showing the fuel oil received is ultralow sulfur fuel oil is sufficient) [ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23)]
	 (a) The stack diameter at the outlet may not exceed 6.0 feet, (b) The stack height shall be at least 58 feet above the ground level, and (c) The stack may not be equipped with any rainhat or other device that may impede the 	(3) The facility shall maintain on site plans and specifications, technical drawings, blueprints or equivalent records of the physical stack parameters including the following:(a) Stack height,(b) Stack inside diameter, and

 $^{^{13}}$ Construction permit 16-TAZ-029 is revising the SO₂ emission limit established in 08-SSS-134 for stack S11. The revised emission limit for stack S11 is set at the SO₂ MTE rate for boiler B26 (6.66 lb/hr). The emission rate is calculated using AP-42 emission factors, the boiler's maximum heat input rating, the worse fuel burned, and a sulfur content limit of 0.046% by weight sulfur. The emission rate limit, when modelled, demonstrated the air standards for SO₂ (including increment) are protected. Stack S11 is increment consuming. Compliance with specified emission limit is achieved by restricting the types of fuels burned by the boiler, the sulfur content of the distillate oil burned, and specifying the critical stack parameters for stack S11.

¹⁴ 40 CFR §60.41b defines a "very low sulfur oil" as an oil that contains no more than 0.30 weight percent sulfur or that, when combusted without sulfur dioxide emission control, has a sulfur dioxide emission rate equal to or less than 140 ng/J (0.32 lb/million BTU) heat input. The facility has elected to limit the sulfur content of the distillate oil burned by boiler B26 to no more than 0.046 % by weight sulfur, which satisfies the definition for "very low sulfur oil" and exempts boiler B26 from the SO₂ emission limit and sulfur reduction requirement in 40 CFR 60, subpart Db and the need for continuous emissions monitoring (SO₂ CEMS).

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)		
3. Pollutant: Sulfur Dioxide		
a. Limitations-	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
a. Limitations-	upward velocity of the exhaust gas. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (16-TAZ-029)] (5) The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by maintaining fuel records as described in 40 CFR §60.49b(r). [40 CFR §60.42b(j)(2), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)

4. Pollutant: Nitrogen Oxides

a. Limitations

(1) The owner or operator shall combust, alone or in combination, only natural gas or distillate oil with a nitrogen content of 0.30 weight percent or less.

[s. 285.65(7), Wis. Stats.]

(2) The owner or operator shall limit the combined annual capacity factor for boiler B26 to no more than 10 percent for natural gas and distillate oil with a nitrogen content of 0.30 weight percent or less. ¹⁵ [40 CFR §60.44b(k) and s. 285.65 (7) and (13), Wis. Stats., s NR 407.09(2)(d), Wis. Adm. Code (08-SSS-134-F23, NSPS)]

b. Compliance Demonstration

- (1) The permittee may only fire natural gas and distillate fuel oil in boiler B26. [s. 285.65(3), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134-F23)]
- (2) The owner or operator of an affected facility described in 40 CFR §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. ¹⁶ The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method or the heat input method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (incorporated by reference, see 40 CFR §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of 40 CFR §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of 40 CFR §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used. [40 CFR

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (1) The permittee shall keep documentation (records) that shows boiler B26 is capable of burning (or burns) only natural gas and distillate fuel oil. [ss. NR 406.11, NR 407.09 (2)(d) and (4)(a)1., and NR 439.04(1)(d), Wis. Adm. Code (08-SSS-134-F23)]
- (2) Except as provided in paragraph (d)(2) of 40 CFR §60.49b (paragraph (b), below), the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of 40 CFR §60.49b (paragraph (a), below).
- (a) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for distillate oil and natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
- (b) As an alternative to meeting the requirements of paragraph (d)(1) of 40 CFR §60.49b (paragraph (a), above), the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

[40 CFR §60.49b(d)(1), s. 285.65(13), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d) and (4)(a)1.a., Wis. Adm. Code (08-SSS-134-F23, NSPS)]

¹⁵ The permittee elects to limit the combined annual capacity factor for boiler B26 to no more than 10% to avoid a NO_x emission limit and the need for continuous emissions monitoring (NO_x CEMS).

¹⁶ An alternative testing method or duration may be approved by the Department and/or EPA.

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)		
4. Pollutant: Nitrogen Oxides		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	§60.46b(g), s. 285.65(3) and (13), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134-F23, NSPS)]	(3) The owner or operator of an affected facility described in 40 CFR §60.44b(k) shall maintain records of the following information for each steam generating unit operating day:
	(3) The owner or operator shall determine at the end of each month for boiler B26 the combined annual capacity factor for natural gas and distillate fuel oil on a 12-month rolling average basis year to date basis. As described in 40 CFR $\S60.41b$, "annual capacity factor" is defined as the ratio between the actual heat input to a steam generating unit from natural gas and distillate fuel oil during a calendar year and the potential heat input to the steam generating unit had it operated for 8760 hours during the calendar year at the maximum steady state desgin heat input capacity (determined in condition (3), above). The combined annual capacity factor for natural gas and distillate fuel oil shall be determined using the following equation: $CCF = \left[\sum_{i=0}^{i} (Q_{gas} \times HI_{gas} + Q_{oil} \times HI_{oil})\right] \div \left[HI_{design} \times 8760\right]$	 (a) Calendar date; (b) The number of hours of operation; and (c) A record of the hourly steam load. [40 CFR §60.49b(p), s. 285.65(13), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d)(4)(a)1.a., Wis. Adm. Code (08-SSS-134-F23, NSPS)] (4) The owner or operator of an affected facility described in 40 CFR §60.44b(k) shall submit to the Administrator a report containing the annual capacity factor over the previous 12 months. [40 CFR §60.49b(q)(1), s. 285.65(13), Wis. Stats., and ss. NR 406.11 and NR 407.09 (2)(d) and (4)(a)1.a., Wis. Adm. Code (08-SSS-134-F23, NSPS)]
	where **CCF* is the combined annual capacity factor for natural gas and distillate fuel oil for boiler B26. **i is the just completed calendar month. **n is the 12 preceding calendar months. **Qgas* is the monthly comsumption of natural gas by boiler B26 in months i through n in units of standard cubic foot. **HI_{gas*} is the heat content for natural gas supplied by the utility for the gas burned in months i through n in units of Btu per standard cubic foot. If this data	

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)		
4. Pollutant: Nitrogen Oxides		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	is not avaiable, a default value of 1,050 Btu per standard cublic foot may be used. Q_{oil} is the monthly comsumption of distillate fuel oil by boiler B26 in months i through n in units of gallons. HI_{oil} is the heat content for distillate fuel oil supplied by the supplier for the oil burned in months i through n in units of Btu per gallon. If this data is not avaiable, a default value of 140,000 Btu per gallon may be used. HI_{design} is the maximum heat input capacity for boiler B26, as determined in condition (3), above, in units of Btu per hour. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)

5. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources [40 CFR part 63, subpart JJJJJJ] - Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations

(1) Operating Restriction. A gas-fired boiler, as defined in 40 CFR §63.11237, is not subject to 40 CFR part 63, subpart JJJJJ and any requirements in this subpart. Pursuant to 40 CFR §63.11237, a "gas-fired boiler" includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 CFR §63.11195(e) and s. 285.65(13), Wis. Stats. (GACT)]

b. Compliance Demonstration

- (1) Operating Restriction. The permittee shall identify the types of fuels burned and track the hours of operation for each boiler while burning a liquid fuel (e.g., distillate oil, residual oil, biodiesel, vegetable oil, ...). The permittee shall classify the hours of operation while burning a liquid fuel as either occurring during a period of gas curtailment, gas supply interruption, boiler startup, periodic (readiness) testing, or other event (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]
- (2) <u>Operating Restriction</u>. At the end of each month, the permittee shall determine the following for each boiler:
- (a) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing for the just completed month; and
- (b) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing year-to-date for the just completed calendar month.
- [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]
- (3) <u>Subcategory Change</u>. For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within 40 CFR part 63, subpart JJJJJJ, you must demonstrate compliance

- c. Reference Test Methods, Recordkeeping and Monitoring Requirements
- (1) <u>Recordkeeping</u>. The permittee shall maintain and have available records of the following items for each boiler:
- (a) The types of fuels burned by each boiler.
- (b) The hours of operation, including the classifications of these hours (purpose of use);
- (c) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing for each calendar month; and
- (d) The total hours of operation while burning a liquid fuel used for periodic (readiness) testing year-to-date for each calendar month.

If the monthly year-to-date total hours of operation while burning a liquid fuel used for periodic (readiness) testing exceeds 48 hours or the boiler while burning a liquid fuel is operated for other than periods of gas curtailment, gas supply interruption, startups, or periodic (readiness) testing, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. ¹⁷ [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

- (2) <u>Subcategory Change Reporting</u>. If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within subpart JJJJJJ, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the change. The notification must identify:
- (a) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched

¹⁷ Operating a boiler while burning a liquid back-up fuel for more than 48 hours in a calendar year for periodic (readiness) testing or operating a boiler while burning a liquid back-up fuel for unapproved periods of operation may result in the boiler being reclassified as a "oil subcategory" boiler.

AC. B26/S11 – One (1) 142.7 MMBtu/hr Natural Gas/Distillate Fuel Oil Fired Boiler (Installed in 2008)		
5. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources [40 CFR part 63, subpart JJJJJJ] - Federal Hazardous Air Pollutants (Federal HAP)		
CFR part 63, subpart JJJJJJ - Federal Hazar	dous Air Pollutants (Federal HAP)	
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	within 180 days of the effective date of the fuel switch or the physical change. Notification of such changes must be submitted according to 40 CFR §63.11225(g). [40 CFR §63.11210(h), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	fuels, or were physically changed, and the date of the notice. (b) The date upon which the fuel switch or physical change occurred. [40 CFR §63.11225(g), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010 with an engine manufactured in 2009			
1. Pollutant: Particulate Matter			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
(1) Emissions may not exceed 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code](2) The permittee shall limit the hours of	(1) The permittee may only fire distillate fuel oil in Process P31. [s. 285.65(3), Wis. Stats., and s. NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134)]	(1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]	
operation for each engine (generator) to no more than 200 hours in any 12 consecutive calendar month period. [ss. NR 400.02 and NR	(2) The permittee shall track each engine's (generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis.	(2) The permittee shall maintain and have available the following records for each engine (generator):	
406.04(1)(w), Wis. Adm. Code] (3) The permittee shall limit particulate matter	Adm. Code] (3) At the end of each month, the permittee shall	(a) The total hours of operation for each calendar month, and(b) The total hours of operation for each 12 consecutive	
emissions from P31 to no more than 0.25 pound per hour. ¹⁸ [ss. NR 404.05 (3) and (8)	determine for each engine (generator) its total hours of operation for the just completed month	calendar month period.	
and NR 407.09(2)(d), Wis. Adm. Code (08-SSS-134)]	and the total hours of operation for the just completed 12 consecutive calendar month period. [s. 285.65(3), Wis. Stats., and s. NR	[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]	
	407.09(4)(a)3.b., Wis. Adm. Code] (4) Stack S11 shall have the parameters listed	(3) The facility shall maintain on site plans and specifications, technical drawings, blueprints or equivalent records of the physical stack parameters including the	
	below:	following:	
	(a) The stack diameter at the outlet may not exceed 0.75 feet,	(a) Stack height,(b) Stack inside diameter, and	
	(b) The stack height shall be at least 15 feet above the ground level, and	(c) Stack exit design.	
	(c) The stack may not be equipped with any rainhat or other device that may impede the upward velocity of the exhaust gas.	[s. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]	
	[s. 285.65(3), Wis. Stats., and s. NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134)]		

¹⁸ Per construction permit 08-SSS-134, the limit is set at the PM MTE rate determined by the AERMIC Model (AERMOD) to protect the National Ambient Air Quality Standards for PM. It was determined that no increments will be violated at this emission rate.

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009			
2. Pollutant: Visible Emissions			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
 (1) Emission may not exceed 20% opacity with the following exceptions: (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. [s. NR 431.05 (1) and (2), Wis. Adm. Code] 	(1) The permittee may only fire distillate fuel oil in Process P31. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]	

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009			
3. Pollutant: Sulfur Dioxide			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
(1) The permittee shall limit sulfur dioxide emissions from Process P31 to 0.784 pound per hour. ¹⁹ [ss. NR 404.05(3) and NR 407.09(2)(d), Wis. Adm. Code (08-SSS-134)]	(1) The permittee shall only fire distillate fuel oil in Process P31. [s. 285.65(3), Wis. Stats., and NR 407.09(4)(a)3.b., Wis. Adm. Code] (2) The sulfur content of the distillate fuel oil may not exceed 0.05 percent by weight sulfur. [s. 285.65(3), Wis. Stats., and ss. NR 404.08(3) and NR 407.09(4)(a)3.b., Wis. Adm. Code]	 (1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code] (2) The permittee shall keep and maintain the following records pertaining to each shipment of fuel oil received by the permittee: 	
	(3) The permittee shall obtain and retain fuel supplier certifications for each shipment of fuel oil ²⁰ received by the facility. The fuel supplier certification shall include the following information:	(a) the date received,(b) the type of fuel oil,(c) the name of the fuel oil supplier,(d) fuel supplier certifications for each shipment of fuel oil received.	
	(a) The name of the oil supplier.(b) A statement from the fuel supplier that the oil complies with the specifications for fuel	[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]	
	oils no. 1 or 2 as defined in ASTM D396-78, "Standard Specification for Fuel Oils." (c) The measured fuel sulfur content in weight percent or confirmation that the oil does not have a sulfur content greater than 0.05	(3) The facility shall maintain on site plans and specifications, technical drawings, blueprints or equivalent records of the physical stack parameters including the following:	
	percent, by weight sulfur. [s. 285.65(3), Wis. Stats., and NR 407.09(4)(a)3.b., Wis. Adm. Code]	(a) Stack height,(b) Stack inside diameter, and(c) Stack exit design.	
	(4) Stack S11 shall have the parameters listed below:	[s. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]	
<u> </u>			

 $^{^{19}}$ Per construction permit 08-SSS-134, the limit is set at the $S0_2$ MTE rate determined by the AERMIC Model (AERMOD) to protect the National Ambient Air Quality Standards for SO_2 . It was determined that no increments will be violated at this emission rate.

²⁰ A shipment of fuel oil may consist of multiple deliveries of fuel oil, provided that each delivery comes from the same fuel oil batch.

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009			
3. Pollutant: Sulfur Dioxide	3. Pollutant: Sulfur Dioxide		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
	 (a) The stack diameter at the outlet may not exceed 0.75 feet, (b) The stack height shall be at least 15 feet above the ground level, and (c) The stack may not be equipped with any rainhat or other device that may impede the upward velocity of the exhaust gas. [s. 285.65(3), Wis. Stats., and s. NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134)] 		

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
4. Pollutant: Nitrogen Oxides		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) The permittee shall limit NO _x emissions from P31 to no more than 4.96 pounds per hour from P31. ²¹ [ss. NR 404.05(3) and NR 407.09(2)(d), Wis. Adm. Code (08-SSS-134)]	 (1) The permittee shall only fire distillate fuel oil in Process P31. [s. 285.65(3), Wis. Stats., and NR 407.09(4)(a)3.b., Wis. Adm. Code] (2) Stack S11 shall have the parameters listed below: (a) The stack diameter at the outlet may not exceed 0.75 feet, (b) The stack height shall be at least 15 feet above the ground level, and (c) The stack may not be equipped with any rainhat or other device that may impede the upward velocity of the exhaust gas. [s. 285.65(3), Wis. Stats., and s. NR 407.09 (2)(d) and (4)(a)3.b., Wis. Adm. Code (08-SSS-134)] 	 (1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code] (2) The facility shall maintain on site plans and specifications, technical drawings, blueprints or equivalent records of the physical stack parameters including the following: (a) Stack height, (b) Stack inside diameter, and (c) Stack exit design. [s. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

Per construction permit 08-SSS-134, the limit is set at the NO_x MTE rate determined by the AERMIC Model (AERMOD) to protect the National Ambient Air Quality Standards for NO_x . It was determined that no increments will be violated at this emission rate.

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009

5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM)

a. Limitations

- (1) Owner or operators of 2007 model year or later emergency stationary compression ignition (CI) internal combustion engines (ICE) with a maximum engine power greater than or equal to 37KW (50 HP) and less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR §89.112 and 40 CFR §89.113 for all pollutants beginning model year 2007.
 - (a) Pursuant to 40 CFR §89.112(a), exhaust emissions from nonroad engines shall not exceed the following emission standards: For model year 2007 and later nonroad engines a with power rating of greater than or equal to 130 KW (175 HP) and less than or equal to 560 KW (750 HP) the applicable exhaust emissions standards are (Tier 3).
 - (i) Non-methane Hydrocarbons and Nitrogen Oxides and (combined): 4.0 g/KW-hr (3.0 g/HP-hr).
 - (ii) Carbon Monoxide: 3.5 g/KW-hr (2.6 g/HP-hr).
 - (iii) Particulate Matter: 0.20 g/KW-hr (0.15 g/HP-hr).
 - (b) Pursuant to 40 CFR §89.113 (a) and (c), exhaust opacity from compression –

b. Compliance Demonstration

- (1) The owners and operators must use diesel fuel that meets the requirements of 40 CFR §80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Pursuant to 40 CFR §80.510(b)(1)(i), the sulfur content for nonroad diesel fuel may not exceed 15 ppm (0.0015 percent by weight). [40 CFR §§ 60.4207(b) and 80.510(b)(1)(i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (2) The following deadlines exist for importing or installing engines produced in previous model years:
 - (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
 - (b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

It is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable

- **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
- (1) The permittee keep a record of the types of fuels purchased for each engine (generator). The records shall identify the fuel as either ultra-low sulfur diesel fuel oil or identify the sulfur content of the oil, as delivered to the storage tank for the engine. [ss. NR 407.09 (2)(d) and (4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
- (2) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The maintenance activities performed, including any inspections and part replacements;
 - (b) A copy of the manufacturer's emissions-related written instructions;
 - (c) A copy of the engine's certification;
 - (d) If equipped with a diesel particulate filter, backpressure measurements and any corrective action taken if the high backpressure limit is approached or exceeded;
 - (e) The hours of operation, including the classifications of these hours (purpose of use);
 - (f) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
 - (g) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) year-to-date for each calendar month;
 - (h) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and
 - (i) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009

5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM)

a. Limitations

ignition nonroad engines must not exceed the following:

- (i) 20 percent during acceleration mode,
- (ii) 15 percent during the lugging mode, and
- (iii) 50 percent during peaks in either acceleration or lugging modes.

Constant-speed engines are exempt from these opacity standards.

[40 CFR §§ 60.4205(b), 60.4202(a)(2), 89.112 and 89.113, s. 285.65(13), Wis. Stats. (NSPS)]

b. Compliance Demonstration

requirements specified above after the dates specified. These requirements do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. [40 CFR §§ 60.4208 (a), (b), (h) and (i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]

- (3) You must comply by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b), for the same model year and maximum engine power. Over the entire life of the engine, the engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of 40 CFR §60.4211 (Condition (5), below). [40 CFR §8 60.4206 and 60.4211(c), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (4) You must over the entire life of the engine do all of the following, except as permitted under paragraph (g) of 40 CFR §60.4211 (Condition (5), below):
 - (a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

If the permittee fails to configure, maintain, and operate an engine (generator) according to the manufacturer's emission-related specifications or instructions, the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours, and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [40 CFR §§ 60.4214 (b) and (c) and 60.4211(g) (1) and (2), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

- (3) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in 40 CFR §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d) (1) through (3) of 40 CFR § 60.4214 (paragraphs (2) (a) through (c), below).
 - (a) The report must contain the following information:
 - (i) Company name and address where the engine is located:
 - (ii) Date of the report and beginning and ending dates of the reporting period;
 - (iii) Engine site rating and model year;
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place;
 - (v) Hours spent for operation for the purposes specified in 40 CFR §60.4211(f)(3)(i), including

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(b) Change only those emission-related settings that are permitted by the manufacturer; and (c) Meet the requirements of 40 CFR parts 89 (Control of Emissions from New and In-use Nonroad CI Engines) and/or 1068 (General Compliance Provisions for Highway, Stationary, and Nonroad Programs), as they apply to you. [40 CFR §§ 60.4206 and 60.4211(a), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (5) If you do not operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance according to 40 CFR §60.4211(g) (1) through (3), as appropriate. [40 CFR §§ 60.4206 and 60.4211(g), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (6) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary	the date, start time, and end time for engine operation for the purposes specified in 40 CFR §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. (b) Each annual report must cover the just completed calendar year and must be submitted no later than March 31 of the current year. (c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR §60.4. [40 CFR § 60.4214(d), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	ICE under 40 CFR part 60, subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (a) There is no time limit on the use of emergency stationary ICE in emergency situations. ²² (b) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (f)(2)(i) of 40 CFR §60.4211 (paragraph (i), below) for a maximum of 100 hours per calendar year. ²³ Any operation for non-emergency situations as allowed by paragraph (d)(3) of 40 CFR §60.4243 (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (f)(2) of §60.4211).	

Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.
 On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl.*

²³ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envil. Control v. EPA*).

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the 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 ICE beyond 100 hours per calendar year. (c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of §60.4211 (paragraph (b), above). Except as provided in paragraph (f)(3)(i) of §60.4211 (paragraph (i), below), the	Requirements

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (i) The 50 hours per year for non- emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. (D) The power is provided only to the facility itself or to support	Requirements

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	distribution system. (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [40 CFR §§ 60.4211(f) and 60.4219, s. 285.65 (30 and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (7) If the emergency stationary CI internal combustion engine (generator) does not meet the standards applicable to nonemergency engines, you must install a nonresettable hour meter upon startup of your emergency engine. [40 CFR § 60.4209(a), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (8) If the emergency stationary CI internal combustion engine (generator) equipped with a diesel particulate filter to comply with the emission standards in 40 CFR § 60.4204, the diesel particulate filter must	

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AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
a. Limitations	be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR § 60.4209(b) , s. 285.65 (3) and (13), Wis. Stats., and sd. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (9) The permittee shall track all hours of operation for each engine (generator). The permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (10) At the end of each month, the permittee shall determine the following for each engine (generator): (a) The total hours of non-emergency operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month;	1 0
	(c) The total hours of non-emergency operation (<u>including</u> maintenance and	
	readiness testing) for the just completed	

AD. P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009		
5. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations b. Compliance Demonstration c. Reference Test Methods, Recordkeeping and Moni Requirements		c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	

a. Limitations

P31/S31 – One (1) Power Plant Diesel Emergency Generator - 500 kW, installed in 2010, mfg 2009 AD.

6. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR part 63, subpart ZZZZ] - Federal Hazardous Air Pollutants (HAP)

(1) An affected source that is a new or reconstructed stationary RICE located at an area source or a new or reconstructed emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements in 40 CFR part 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart IIII for compression ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40] CFR §63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (MACT/GACT)]

(1) The compliance demonstration requirements for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (MACT/GACT)]

b. Compliance Demonstration

Requirements (1) The monitoring and recordkeeping requirements for the NSPS in subsection 3.c., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR

c. Reference Test Methods, Recordkeeping and Monitoring

439.04(1)(d), Wis. Adm. Code (MACT/GACT)]

Part I – University of Wisconsin (UW) Index

Section BB One (1) Campus Diesel-Fired Emergency Generator - Installed after June 12, 200 and equipped with an engine manufactured before 2007 (P99B, S99B))6
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Section BI Four (4) Campus Natural Gas-Fired Emergency Generators - Equipped with engines manufactured on or after January 1, 2009 and rated ≥ 130 HP (P99I, S99	I)

1. Pollutant: Particulate Matter		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code]	(1) Each engine (generator) shall burn only diesel fuel oil. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
(2) For emergency generators claiming a construction permit exemption under s. NR 406.04(1)(w), Wis. Adm. Code, the permittee shall limit the hours of operation for each engine (generator) to no more than 200 hours in any 12 consecutive calendar month period. [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code]	 (2) The permittee shall track each engine's (generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) At the end of each month, the permittee shall for each engine (generator) claiming a construction permit exemption under s. NR 406.04(1)(w), Wis. Adm. Code, determine its total hours of operation for the just completed month and its total hours of operation over the 12 most recent consecutive calendar month period. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] 	 (2) The permittee shall maintain and have available the following records for each engine (generator) claiming a construction permit exemption under s. NR 406.04(1)(w), Wis. Adm. Code: (a) The total hours of operation for each calendar month and (b) The total hours of operation for each 12 consecutive calendar month period. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

(34 HP), McGraw 105 kW (141 HP), Upham 105 kW (141 HP), and Wells 210 kW (281 HP)		
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emission may not exceed 20% opacity for an engine installed, constructed or last modified after April 1, 1972, with the following exceptions:	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm.	(1) The monitoring and recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
 (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. 	Code]	Codej
[s. NR 431.05 (1) and (2), Wis. Adm. Code]		

3. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations

(1) Existing Institutional Emergency RICE. Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in 40 CFR §63.6640(f)(4)(ii) are not subject to 40 CFR part 63, subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR §63.6675, which includes operating according to the provisions specified in 40 CFR §63.6640(f). [40 CFR §8 63.6585(f)(3) and 63.6590(a)(1)(iii), s. 285.65(13), Wis. Stats. (GACT)]

b. Compliance Demonstration

- (1) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (1), (2) and (4) of 40 CFR §63.6640(f) (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary RICE under 40 CFR part 63, subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1), (2) and (4) of 40 CFR §63.6640(f) (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (1), (2) and (4) of 40 CFR §63.6640(f) (paragraphs (a) through (c), below), the engine will not be considered an emergency engine under this subpart and must meet all requirements for nonemergency engines.
 - (a) There is no time limit on the use of emergency stationary RICE in emergency situations. ²⁴
 - (b) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraph (i) of 40 CFR §63.6640(f)(2) (paragraph (i),

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (1) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The hours of operation, including the classifications of these hours (purpose of use);
 - (b) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
 - (c) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) year-to-date for each calendar month;
 - (d) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and
 - (e) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.

If the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, 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. and NR 439.04(1)(d), Wis. Adm. Code]

²⁴ Although unlimited engine (generator) use is authorized under the RICE during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

[40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	below) for a maximum of 100 hours per	•
	calendar year. 25 Any operation for non-	
	emergency situations as allowed by paragraph (4) of 40 CFR §63.6640(f)	
	(paragraph (c), below) counts as part of	
	the 100 hours per calendar year allowed	
	by this paragraph (paragraph (f)(2) of 40	
	CFR §63.6640).	
	(i) Emergency stationary RICE may be	
	operated for maintenance checks and	
	readiness testing, provided that the	
	tests are recommended by federal, state or local government, the	
	manufacturer, the vendor, the	
	regional transmission organization or	
	equivalent balancing authority and	
	transmission operator, or the	
	insurance company associated with	
	the engine. The owner or operator	
	may petition the 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 calendar year.	
	per carendar year.	
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²⁵ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*).

BA.	Process P99A, Stack S99A – Four (4) Campus Diesel-Fired Emergency Generators (Installed on or before June 12, 2006): General Services 25 kW
	(34 HP), McGraw 105 kW (141 HP), Upham 105 kW (141 HP), and Wells 210 kW (281 HP)

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(c) Emergency stationary ICE located at area sources may be operated for up to 50 hours per calendar year in nonemergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of 40 CFR §63.6640 (paragraph (b), above). The 50 hours per year for nonemergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR §§ 63.6585(f), 63.6590(a)(1)(iii), 63.6640(f) and 63.6675, and s. 285.65(13), Wis. Stats. (GACT)] (2) The permittee shall track all hours of operation for each engine (generator). The permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	

BA.	Process P99A, Stack S99A – Four (4) Campus Diesel-Fired Emergency Generators (Installed on or before June 12, 2006): General Services 25 kW
	(34 HP), McGraw 105 kW (141 HP), Upham 105 kW (141 HP), and Wells 210 kW (281 HP)

[40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(3) At the end of each month, the permittee shall determine the following for each engine (generator):(a) The total hours of non-emergency	
	operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month;	
	(c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month.	
	[s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	

manufactured before 2007): University Center 134 kW (180 HP), mfg. 2006		
1. Pollutant: Particulate Matter		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code](2) The permittee shall limit the hours of	(1) Each engine (generator) shall burn only diesel fuel oil. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
operation for each engine (generator) to no more than 200 hours in any 12 consecutive calendar month period. [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code]	(2) The permittee shall track each engine's (generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(2) The permittee shall maintain and have available the following records for each engine (generator):(a) The total hours of operation for each calendar month, and
	(3) At the end of each month, the permittee shall determine for each engine (generator) its total hours of operation for the just completed month and the total hours of operation for the just completed 12 consecutive calendar month period. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(b) The total hours of operation for each 12 consecutive calendar month period.[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

[s. NR 431.05 (1) and (2), Wis. Adm. Code]

BB. Process P99B, Stack S99B – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006 and equipped with an engine manufactured before 2007): University Center 134 kW (180 HP), mfg. 2006		
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emission may not exceed 20% opacity with the following exceptions: (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. 	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)1., Wis. Adm. Code]

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM)

a. Limitations

- (1) Owner or operators of pre-2007 model year emergency stationary compression ignition (CI) internal combustion engines (ICE) with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 of 40 CFR part 63, subpart IIII. Pursuant to Table 1 of 40 CFR part 60, subpart IIII, the emissions from stationary pre-2007 model year engine with a displacement of less than 10 liters per cylinder and a power rating of greater than or equal to 130 KW (175 HP) are as follows:
 - (a) Hydrocarbon: 1.3 g/KW-hr (1.0 g/HP-hr).
 - (b) Nitrogen Oxides: 9.2 g/KW-hr (6.9 g/HP-hr).
 - (c) Carbon Monoxide: 11.4 g/KW-hr (8.5 g/HP-hr), and
 - (d) Particulate Matter: 0.54 g/KW-hr (0.40 g/HP-hr).

[40 CFR §§ 60.4205(a) and Table 1, s. 285.65(13), Wis. Stats. (NSPS)]

b. Compliance Demonstration

- (1) The owners and operators must use diesel fuel that meets the requirements of 40 CFR \$80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Pursuant to 40 CFR \$80.510(b)(1)(i), the sulfur content for nonroad diesel fuel may not exceed 15 ppm (0.0015 percent by weight). [40 CFR \$\$ 60.4207(b) and 80.510(b)(1)(i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (2) The following deadlines exist for importing or installing engines produced in previous model years:
 - (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
 - (b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

It is prohibited to import stationary CI ICE

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (1) The permittee keep a record of the types of fuels purchased for each engine (generator). The records shall identify the fuel as either ultra-low sulfur diesel fuel oil or identify the sulfur content of the oil, as delivered to the storage tank for the engine. [ss. NR 407.09 (2)(d) and (4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
- (2) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The maintenance activities performed, including any inspections and part replacements;
 - (b) A copy of the manufacturer's emissions-related written instructions;
 - (c) A copy of the engine's emission certification or equivalent emission data from the manufacturer;
 - (d) If equipped with a diesel particulate filter, backpressure measurements and any corrective action taken if the high backpressure limit is approached or exceeded;
 - (e) The hours of operation, including the classifications of these hours (purpose of use);
 - (f) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
 - (g) The total non-emergency hours of operation (excluding maintenance and readiness testing) year-to-date for each calendar month;
 - (h) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and

(PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified above after the dates specified. These requirements do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. [40 CFR §60.4208 (a), (b), (h) and (i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (3) You must over the entire life of the engine demonstrate compliance according to one of the methods specified in paragraphs (b) (1) through (5) of 40 CFR §60.4211. Specified below are two of the five available methods:	(i) The total non-emergency hours of operation (including maintenance and readiness testing) year- to-date for each calendar month. If the permittee fails to configure, maintain, and operate an engine (generator) according to the manufacturer's emission-related specifications or instructions, the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours, and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [40 CFR §§ 60.4214 (b) and (c) and 60.4211(g) (1) and (2), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]
	 (a) Purchasing an engine certified according to 40 CFR part 89 (Control of Emissions from New and In-use Nonroad CI Engines) for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications. (b) Keeping records of engine manufacturer data indicating compliance with the standards. [40 CFR §§ 60.4206 and 60.4211(b) (1) and 	 (3) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in 40 CFR §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d) (1) through (3) of 40 CFR § 60.4214 (paragraphs (a) through (c), below). (a) The report must contain the following information: (i) Company name and address where the engine is located; (ii) Date of the report and beginning and ending

(PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(3), s. 285.65 (3) and (13), Wis. Stats., and	dates of the reporting period;
	s. NR 407.09(4)(a)3.b., Wis. Adm. Code	(iii) Engine site rating and model year;
	(NSPS)]	(iv) Latitude and longitude of the engine in decimal
		degrees reported to the fifth decimal place;
	(4) You must over the entire life of the engine	(v) Hours spent for operation for the purposes
	do all of the following, except as permitted	specified in 40 CFR §60.4211(f)(3)(i), including
	under paragraph (g) of 40 CFR §60.4211	the date, start time, and end time for engine
	(Condition (5), below):	operation for the purposes specified in 40 CFR
		§60.4211(f)(3)(i). The report must also identify
	(a) Operate and maintain the stationary CI	the entity that dispatched the engine and the
	internal combustion engine and control	situation that necessitated the dispatch of the
	device according to the manufacturer's	engine.
	emission-related written instructions;	4) 7 1
	(b) Change only those emission-related	(b) Each annual report must cover the just completed
	settings that are permitted by the manufacturer; and	calendar year and must be submitted no later than
	(c) Meet the requirements of 40 CFR parts	March 31 of the current year. (c) The annual report must be submitted electronically
	89 (Control of Emissions from New and	using the subpart specific reporting form in the
	In-use Nonroad CI Engines) and/or 1068	Compliance and Emissions Data Reporting Interface
	(General Compliance Provisions for	(CEDRI) that is accessed through EPA's Central Data
	Highway, Stationary, and Nonroad	Exchange (CDX) (www.epa.gov/cdx). However, if
	Programs), as they apply to you.	the reporting form specific to this subpart is not
	l rograms), as arey appry to you.	available in CEDRI at the time that the report is due,
	[40 CFR §§ 60.4206 and 60.4211(a), s.	the written report must be submitted to the
	285.65 (3) and (13), Wis. Stats., and s. NR	Administrator at the appropriate address listed in 40
	407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	CFR §60.4.
	,,,,	
	(5) If you do not operate and maintain the	[40 CFR § 60.4214(d), s. 285.65(13), Wis. Stats., and ss.
	stationary CI internal combustion engine	NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm.
	and control device according to the	Code (NSPS)]
	manufacturer's emission-related written	
	instructions over the entire life of the	

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	engine, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance according to 40 CFR §60.4211(g) (1) through (3), as appropriate. [40 CFR §§ 60.4206, 60.4206 and 60.4211(g), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(6) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary ICE under 40 CFR part 60, subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below), the engine will not be considered an emergency	
	engine under this subpart and must meet all requirements for non-emergency engines.	

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	 (a) There is no time limit on the use of emergency stationary ICE in emergency situations. ²⁶ (b) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (f)(2)(i) of 40 CFR §60.4211 (paragraph (i), below) for a maximum of 100 hours per calendar year. ²⁷ Any operation for non-emergency situations as allowed by paragraph (d)(3) of 40 CFR §60.4243 (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (f)(2) of §60.4211). 	
	(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for	

²⁶ Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*).

(PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	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 ICE beyond 100 hours per calendar year.	
	(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of \$60.4211 (paragraph (b), above). Except as provided in paragraph (f)(3)(i) of \$60.4211 (paragraph (i), below), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.	
	(i) The 50 hours per year for non- emergency situations can be used to supply power as part of a financial arrangement with another entity if all	

(PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	of the following conditions are met:	
	(4) 771	
	(A) The engine is dispatched by the	
	local balancing authority or local transmission and distribution	
	system operator; (B) The dispatch is intended to	
	mitigate local transmission	
	and/or distribution limitations so	
	as to avert potential voltage	
	collapse or line overloads that	
	could lead to the interruption of	
	power supply in a local area or	
	region.	
	(C) The dispatch follows reliability,	
	emergency operation or similar	
	protocols that follow specific	
	NERC, regional, state, public	
	utility commission or local	
	standards or guidelines.	
	(D) The power is provided only to the facility itself or to support	
	the local transmission and	
	distribution system.	
	(E) The owner or operator identifies	
	and records the entity that	
	dispatches the engine and the	
	specific NERC, regional, state,	
	public utility commission or	
	local standards or guidelines that	
	are being followed for	
	dispatching the engine. The	

(PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	local balancing authority or local	
	transmission and distribution system operator may keep these	
	records on behalf of the engine	
	owner or operator.	
	[40 CFR §§ 60.4211(f) and 60.4219, s.	
	285.65 (3) and (13), Wis. Stats., and s. NR	
	407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(7) If the emergency stationary CI internal	
	combustion engine (generator) does not	
	meet the standards applicable to non- emergency engines, you must install a non-	
	resettable hour meter upon startup of your	
	emergency engine. [40 CFR §60.4209(a),	
	s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	407.09(4)(a)3.0., WIS. Adili. Code (NSFS)]	
	(8) If the emergency stationary CI internal	
	combustion engine (generator) equipped with a diesel particulate filter to comply	
	with the emission standards in 40 CFR	
	§60.4204, the diesel particulate filter must	
	be installed with a backpressure monitor that notifies the owner or operator when the high	
	backpressure limit of the engine is	
	approached. [40 CFR §60.4209(b), s.	
	285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	+07.07(4)(a)3.0., WIS. Adill. Code (NSFS)]	
	(9) The permittee shall track all hours of	

(PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	operation for each engine (generator). The permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (10) At the end of each month, the permittee shall determine the following for each engine (generator): (a) The total hours of non-emergency operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month; (c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month.	

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	[s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) An affected source that is a new or reconstructed stationary RICE located at an area source or a new or reconstructed emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements in 40 CFR part 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart IIII for compression ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40 CFR §63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (GACT)]	(1) The compliance demonstration requirements for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	(1) The monitoring and recordkeeping requirements for the NSPS in subsection 3.c., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007

manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007		
1. Pollutant: Particulate Matter		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emissions may not exceed 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code] (2) The permittee shall limit the hours of operation for each engine (generator) to no more than 200 hours in any 12 consecutive calendar month period. [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code] 	 (1) Each engine (generator) shall burn only diesel fuel oil. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (2) The permittee shall track each engine's (generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) At the end of each month, the permittee shall determine for each engine (generator) its total hours of operation for the just completed month and the total hours of operation for the just completed 12 consecutive calendar month period. [s. 285.65(3), Wis. Stats., and s. NR 	(1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code] (2) The permittee shall maintain and have available the following records for each engine (generator): (a) The total hours of operation for each calendar month, and (b) The total hours of operation for each 12 consecutive calendar month period. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
	407.09(4)(a)3.b., Wis. Adm. Code]	

BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007		
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emission may not exceed 20% opacity with the following exceptions: (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. 	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)1., Wis. Adm. Code]
[s. NR 431.05 (1) and (2), Wis. Adm. Code]		

BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM)

a. Limitations

(1) Owner or operators of 2007 model year or later emergency stationary compression ignition (CI) internal combustion engines (ICE) with a maximum engine power less than or equal to 37KW (50 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR §89.112 and 40 CFR §89.113 for all

pollutants for model year 2007 engines.

- (a) Pursuant to 40 CFR §89.112(a), exhaust emissions from nonroad engines shall not exceed the following emission standards for a model year 2007 nonroad engine with a power rating of greater than or equal to 8 KW (11 HP) and less than 19 KW (25 HP), Tier 2 emission standards.
 - (i) Non-methane Hydrocarbon and Nitrogen Oxides (combined): 7.5 g/KW-hr (5.6 g/HP-hr).
 - (ii) Carbon Monoxide: 6.6 g/KW-hr (4.9 g/HP-hr).
 - (iii) Particulate Matter: 0.80 g/KW-hr (0.60 g/HP-hr).
- (b) Pursuant to 40 CFR §89.113 (a) and (c), exhaust opacity from compression

b. Compliance Demonstration

- (1) The owners and operators must use diesel fuel that meets the requirements of 40 CFR §80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Pursuant to 40 CFR §80.510(b)(1)(i), the sulfur content for nonroad diesel fuel may not exceed 15 ppm (0.0015 percent by weight). [40 CFR §§ 60.4207(b) and 80.510(b)(1)(i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (2) The following deadlines exist for importing or installing engines produced in previous model years:
 - (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
 - (b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

It is prohibited to import stationary CI ICE with a displacement of less than 30 liters

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (1) The permittee keep a record of the types of fuels purchased for each engine (generator). The records shall identify the fuel as either ultra-low sulfur diesel fuel oil or identify the sulfur content of the oil, as delivered to the storage tank for the engine. [ss. NR 407.09 (2)(d) and (4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
- (2) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The maintenance activities performed, including any inspections and part replacements;
 - (b) A copy of the manufacturer's emissions-related written instructions;
 - (c) A copy of the engine's certification;
 - (d) If equipped with a diesel particulate filter, backpressure measurements and any corrective action taken if the high backpressure limit is approached or exceeded;
 - (e) The hours of operation, including the classifications of these hours (purpose of use);
 - (f) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
 - (g) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) year-to-date for each calendar month;
 - (h) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and
 - (i) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.

BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM) a. Limitations b. Compliance Demonstration c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- -ignition nonroad engines must not exceed the following:
- (i) 20 percent during acceleration mode,
- (ii) 15 percent during the lugging mode, and
- (iii) 50 percent during peaks in either acceleration or lugging modes. Constant-speed engines are exempt from these opacity standards.

[40 CFR §§ 60.4205(b), 60.4202(a)(1)(i), 89.112 and 89.113, s. 285.65(13), Wis. Stats. (NSPS)]

- per cylinder that do not meet the applicable requirements specified above after the dates specified. These requirements do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. [40 CFR §§ 60.4208 (a), (b), (h) and (i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (3) You must comply by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b), for the same model year (2007) and maximum engine power. Over the entire life of the engine, the engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of 40 CFR §60.4211 (Condition (5), below). [40 CFR §8 60.4206 and 60.4211(c), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (4) You must over the entire life of the engine do all of the following, except as permitted under paragraph (g) of 40 CFR §60.4211 (Condition (5), below):
 - (a) Operate and maintain the stationary CI internal combustion engine and control

If the permittee fails to configure, maintain, and operate an engine (generator) according to the manufacturer's emission-related specifications or instructions, the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours, and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [40 CFR §§ 60.4214 (b) and (c) and 60.4211(g) (1) and (2), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

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BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007		
		nal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-(NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	device according to the manufacturer's emission-related written instructions; (b) Change only those emission-related settings that are permitted by the manufacturer; and (c) Meet the requirements of 40 CFR parts 89 (Control of Emissions from New and In-use Nonroad CI Engines) and/or 1068 (General Compliance Provisions for Highway, Stationary, and Nonroad Programs), as they apply to you. [40 CFR §§ 60.4206, 60.4206 and 60.4211(a), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (5) If you do not operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions over the entire life of the engine, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance according to 40 CFR §60.4211(g) (1) through (3), as appropriate. [40 CFR §60.4206, 60.4206 and 60.4211(g), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	

(6) If you own or operate an emergency

Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
stationary ICE, you must operate the		
emergency stationary ICE according to the		
requirements in paragraphs (f) (1) through		
(3) of 40 CFR §60.4211 (paragraphs (a)		
through (c), below). In order for the engine		
requirements for non-emergency engines.		
(a) There is no time limit on the use of		
situations. ²⁸		
per calendar year. ²⁹ Any operation for		
	stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary ICE under 40 CFR part 60, subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f) (1) through (3) of 40 CFR §60.4211 (paragraphs (a) through (c), below), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (a) There is no time limit on the use of emergency stationary ICE in emergency stationary ICE in emergency stationary ICE for any combination of the purposes specified in paragraph (f)(2)(i) of 40 CFR §60.4211 (paragraph (i), below) for a maximum of 100 hours	

²⁸ Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

²⁹ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl.*

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-

Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	non-emergency situations as allowed by paragraph (d)(3) of 40 CFR \$60.4243 (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (f)(2) of \$60.4211). (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the 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 ICE beyond 100 hours per calendar year.	Requirements
	(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The	

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BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007		
		nal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-(NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of §60.4211 (paragraph (b), above). Except as provided in paragraph (f)(3)(i) of §60.4211 (paragraph (i), below), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or	

region.

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BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007			
· ·	3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
	(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. (D) The power is provided only to the facility itself or to support the local transmission and distribution system. (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [40 CFR §§ 60.4211(f) and 60.4219, s. 285.65 (30 and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (7) If the emergency stationary CI internal combustion engine (generator) does not meet the standards applicable to nonemergency engines, you must install a non-reception of the contraction of the contract		

resettable hour meter upon startup of your

BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007			
	3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _y), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
	emergency engine. [40 CFR § 60.4209(a), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]		
	(8) If the emergency stationary CI internal combustion engine (generator) equipped with a diesel particulate filter to comply with the emission standards in 40 CFR §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR § 60.4209(b) , s. 285.65 (3) and (13), Wis. Stats., and sd. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]		
	 (9) The permittee shall track all hours of operation for each engine (generator). The permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (10) At the end of each month, the permittee shall determine the following for each engine (generator): 		

BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine	
manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007	

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	 (a) The total hours of non-emergency operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month; (c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] 	

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BC. Process P99C, Stack S99C – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006, equipped with an engine manufactured in 2007 and rated < 50 HP: Clem 15 kW (20 HP), mfg. 2007

4. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) An affected source that is a new or reconstructed stationary RICE located at an area source or a new or reconstructed emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements in 40 CFR part 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart IIII for compression ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40 CFR §63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (GACT)]	(1) The compliance demonstration requirements for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	(1) The monitoring and recordkeeping requirements for the NSPS in subsection 3.c., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

manufactured in 2008 and rated < 50 HP): Moraine 26 kW (35 HP), mfg. 2008		
1. Pollutant: Particulate Matter		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code](2) The permittee shall limit the hours of	(1) Each engine (generator) shall burn only diesel fuel oil. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
operation for each engine (generator) to no more than 200 hours in any 12 consecutive calendar month period. [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code]	(2) The permittee shall track each engine's (generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) At the end of each month, the permittee	(2) The permittee shall maintain and have available the following records for each engine (generator):(a) The total hours of operation for each calendar month, and(b) The total hours of operation for each 12 consecutive
	shall determine for each engine (generator) its total hours of operation for the just completed month and the total hours of operation for the just completed 12 consecutive calendar month period. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	calendar month period. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

[s. NR 431.05 (1) and (2), Wis. Adm. Code]

BD. Process P99D, Stack S99D – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006 and equipped with an engine manufactured in 2008 and rated < 50 HP): Moraine 26 kW (35 HP), mfg. 2008		
2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emission may not exceed 20% opacity with the following exceptions:	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the	(1) The recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis.
 (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. 	applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	Stats., and s. NR 407.09(4)(a)1., Wis. Adm. Code]

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)

a. Limitations (2) Owner or operators of 2007 model year or

- later emergency stationary compression ignition (CI) internal combustion engines (ICE) with a maximum engine power less than or equal to 37KW (50 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the certification emission standards for new nonroad CI engines in 40 CFR §1039.104, 40 CFR §1039.105, 40 CFR §1039.107, 40 CFR §1039.115, and table 2 of 40 CFR part 63, subpart IIII, for 2008 model year and later engines.
 - (a) Pursuant to table 2 of 40 CFR part 63, subpart IIII, exhaust emissions from nonroad engines shall not exceed the following emission standards for a model year 2008 and later engine with a power rating of greater than or equal to 19 KW (25 HP) and less than 37 KW (50 HP).
 - (i) Nitrogen Oxides and Non-methane Hydrocarbons (combined): 7.5 g/KW-hr (5.6 g/HP-hr).
 - (ii) Carbon Monoxide: 5.5 g/KW-hr (4.1 g/HP-hr).
 - (iii) Particulate Matter: 0.30 g/KW-hr (0.22 g/HP-hr).
 - (b) Pursuant to 40 CFR §1039.105 (a) and (b), smoke from your engines may not

b. Compliance Demonstration

- (1) The owners and operators must use diesel fuel that meets the requirements of 40 CFR §80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Pursuant to 40 CFR §80.510(b)(1)(i), the sulfur content for nonroad diesel fuel may not exceed 15 ppm (0.0015 percent by weight). [40 CFR §§ 60.4207(b) and 80.510(b)(1)(i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (2) The following deadlines exist for importing or installing engines produced in previous model years:
 - (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
 - (b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

It is prohibited to import stationary CI ICE with a displacement of less than 30 liters

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (1) The permittee keep a record of the types of fuels purchased for each engine (generator). The records shall identify the fuel as either ultra-low sulfur diesel fuel oil or identify the sulfur content of the oil, as delivered to the storage tank for the engine. [ss. NR 407.09 (2)(d) and (4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
- (2) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The maintenance activities performed, including any inspections and part replacements;
 - (b) A copy of the manufacturer's emissions-related written instructions:
 - (c) A copy of the engine's certification;
 - (d) If equipped with a diesel particulate filter, backpressure measurements and any corrective action taken if the high backpressure limit is approached or exceeded:
 - (e) The hours of operation, including the classifications of these hours (purpose of use);
 - (f) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month:
 - (g) The total non-emergency hours of operation (excluding maintenance and readiness testing) yearto-date for each calendar month;
 - (h) The total non-emergency hours of operation (including maintenance and readiness testing) for each calendar month; and
 - (i) The total non-emergency hours of operation (including maintenance and readiness testing) year-

a. Limitations

BD. Process P99D, Stack S99D – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006 and equipped with an engine manufactured in 2008 and rated < 50 HP): Moraine 26 kW (35 HP), mfg. 2008 Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbor Monoxide (CO), Nitrogen Oxides (NO_x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)

exceed the following: (i) 20 percent during acceleration mode, (ii) 15 percent during the lugging mode, and

- (iii) 50 percent during peaks in either acceleration or lugging modes. Constant-speed engines are exempt from these opacity standards.
- (c) Pursuant to 40 CFR §1039.107, There are no evaporative emission standards for diesel-fueled engines, or engines using other nonvolatile or nonliquid fuels (for example, natural gas).
- (d) Pursuant to 40 CFR §1039.111(a), crankcase emissions may not be discharged directly into the ambient atmosphere from any engine throughout its useful life, except as follows:
 - (i) Engines may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing.
 - (ii) If you take advantage of this exception, you must do the

b. Compliance Demonstration

per cylinder that do not meet the applicable requirements specified above after the dates specified. These requirements do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. [40 CFR §§ 60.4208 (a), (b), (h) and (i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]

- (3) You must comply by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b), for the same model year and maximum engine power. the engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of 40 CFR §60.4211 (Condition (5), below). [40 CFR §§ 60.4206 and 60.4211(c), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (4) You must over the entire life of the engine do all of the following, except as permitted under paragraph (g) of 40 CFR §60.4211 (Condition (5), below):
 - (a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

to-date for each calendar month.

If the permittee fails to configure, maintain, and operate an engine (generator) according to the manufacturer's emission-related specifications or instructions, the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours, and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [40 CFR §§ 60.4214 (b) and (c) and 60.4211(g) (1) and (2), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

BD. Process P99D, Stack S99D – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006 and equipped with an engine manufactured in 2008 and rated < 50 HP): Moraine 26 kW (35 HP), mfg. 2008		
	mance (NSPS) for Stationary Spark Ignition Internrecarbons (HC) and/or Volatile Organic Compound	tal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon ds (VOC)
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
all operation are not considered to be discharged directly into the ambient atmosphere. [40 CFR §§ 60.4205(b), 60.4202(a)(1)(ii), and Table 2 and 40 CFR §§ 1039.105, 1039.107 and 1039.115, s. 285.65(13), Wis. Stats. (NSPS)]	emission-related written instructions; (b) Change only those emission-related settings that are permitted by the manufacturer; and (c) Meet the requirements of 40 CFR parts 89 (Control of Emissions from New and In-use Nonroad CI Engines) and/or 1068 (General Compliance Provisions for Highway, Stationary, and Nonroad Programs), as they apply to you. [40 CFR §§ 60.4206, 60.4206 and 60.4211(a), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (5) If you do not operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions over the entire life of the engine, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance according to 40 CFR §60.4211(g) (1) through (3), as appropriate. [40 CFR §§ 60.4206, 60.4206 and 60.4211(g), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	emergency stationary ICE according to the	
	requirements in paragraphs (f) (1) through	
	(3) of 40 CFR §60.4211 (paragraphs (a)	
	through (c), below). In order for the engine	
	to be considered an emergency stationary	
	ICE under 40 CFR part 60, subpart IIII, any	
	operation other than emergency operation,	
	maintenance and testing, and operation in	
	non-emergency situations for 50 hours per	
	year, as described in paragraphs (f) (1)	
	through (3) of 40 CFR §60.4211	
	(paragraphs (a) through (c), below), is	
	prohibited. If you do not operate the engine	
	according to the requirements in paragraphs	
	(f) (1) through (3) of 40 CFR §60.4211	
	(paragraphs (a) through (c), below), the	
	engine will not be considered an emergency	
	engine under this subpart and must meet all	
	requirements for non-emergency engines.	
	(a) There is no time limit on the use of	
	emergency stationary ICE in emergency	
	situations. 30	
	(b) You may operate your emergency	
	stationary ICE for any combination of	
	the purposes specified in paragraph	
	(f)(2)(i) of 40 CFR §60.4211 (paragraph	
	(i), below) for a maximum of 100 hours	
	per calendar year. ³¹ Any operation for	

³⁰ Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

³¹ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*).

BD. Process P99D, Stack S99D – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006 and equipped with an engine manufactured in 2008 and rated < 50 HP): Moraine 26 kW (35 HP), mfg. 2008		
	mance (NSPS) for Stationary Spark Ignition Interrocarbons (HC) and/or Volatile Organic Compound	nal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon ds (VOC)
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	non-emergency situations as allowed by paragraph (d)(3) of 40 CFR §60.4243 (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (f)(2) of §60.4211).	
	(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator	
	may petition the 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 ICE beyond 100 hours per calendar year.	
	(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency	

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	situations are counted as part of the 100	
	hours per calendar year for maintenance	
	and testing provided in paragraph (f)(2)	
	of §60.4211 (paragraph (b), above).	
	Except as provided in paragraph (f)(3)(i)	
	of §60.4211 (paragraph (i), below), the	
	50 hours per year for non-emergency	
	situations cannot be used for peak	
	shaving or non-emergency demand response, or to generate income for a	
	facility to an electric grid or otherwise	
	supply power as part of a financial	
	arrangement with another entity.	
	uningenion with unouter charty.	
	(i) The 50 hours per year for non-	
	emergency situations can be used to	
	supply power as part of a financial	
	arrangement with another entity if all	
	of the following conditions are met:	
	(A) The engine is dispatched by the	
	local balancing authority or local	
	transmission and distribution	
	system operator;	
	(B) The dispatch is intended to	
	mitigate local transmission	
	and/or distribution limitations so	
	as to avert potential voltage	
	collapse or line overloads that	
	could lead to the interruption of	
	power supply in a local area or	
	region. (C) The dispetch follows reliability	
	(C) The dispatch follows reliability,	

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	emergency operation or similar	
	protocols that follow specific	
	NERC, regional, state, public	
	utility commission or local	
	standards or guidelines.	
	(D) The power is provided only to	
	the facility itself or to support	
	the local transmission and	
	distribution system.	
	(E) The owner or operator identifies	
	and records the entity that	
	dispatches the engine and the	
	specific NERC, regional, state, public utility commission or	
	local standards or guidelines that	
	are being followed for	
	dispatching the engine. The	
	local balancing authority or local	
	transmission and distribution	
	system operator may keep these	
	records on behalf of the engine	
	owner or operator.	
	•	
	[40 CFR §§ 60.4211(f) and 60.4219, s.	
	285.65 (30 and (13), Wis. Stats., and s. NR	
	407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(7) If the emergency stationary CI internal	
	combustion engine (generator) does not	
	meet the standards applicable to non-	
	emergency engines, you must install a non-	
	resettable hour meter upon startup of your	
	emergency engine. [40 CFR § 60.4209(a),	

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BD. Process P99D, Stack S99D – One (1) Campus Diesel-Fired Emergency Generator (Installed after June 12, 2006 and equipped with an engine manufactured in 2008 and rated < 50 HP): Moraine 26 kW (35 HP), mfg. 2008		
,	rmance (NSPS) for Stationary Spark Ignition International (NSPS) for Volatile Organic Compound	nal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon ds (VOC)
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (8) If the emergency stationary CI internal combustion engine (generator) equipped with a diesel particulate filter to comply with the emission standards in 40 CFR §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR § 60.4209(b), s. 285.65 (3) and (13), Wis. Stats., and sd. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (9) The permittee shall track all hours of operation for each engine (generator). The permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (10) At the end of each month, the permittee	
	(10) At the end of each month, the permittee	

shall determine the following for each engine (generator):

(a) The total hours of non-emergency

BD. Process P99D, Stack S99D – One (1) Campus Diesel-Fired Emergency Generator (Installed after June	e 12, 2006 and equipped with an engine
manufactured in 2008 and rated < 50 HP): Moraine 26 kW (35 HP), mfg. 2008	

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month; (c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	

4. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) An affected source that is a new or reconstructed stationary RICE located at an area source or a new or reconstructed emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements in 40 CFR part 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart IIII for compression ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40 CFR §63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (GACT)]	(1) The compliance demonstration requirements for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	(1) The monitoring and recordkeeping requirements for the NSPS in subsection 3.c., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

BE. Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated 50 ≤ HP ≤ 3000): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007		
1. Pollutant: Particulate Matter		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code](2) The permittee shall limit the hours of	(1) Each engine (generator) shall burn only diesel fuel oil. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The permittee shall maintain and have available documentation showing diesel fuel oil is the only fuel burned by the engines (generators). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
operation for each engine (generator) to no more than 200 hours in any 12 consecutive calendar month period. [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code]	(2) The permittee shall track each engine's (generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(2) The permittee shall maintain and have available the following records for each engine (generator):(a) The total hours of operation for each calendar month, and
	(3) At the end of each month, the permittee shall determine for each engine (generator) its total hours of operation for the just completed month and the total hours of operation for the just completed 12 consecutive calendar month period. [s.	(b) The total hours of operation for each 12 consecutive calendar month period.[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]

- BE. Process P99E, Stack S99E Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, $\overline{2006}$ and equipped with engines manufactured in 2007 or later and rated $50 \le \text{HP} \le 3000$): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007
- 2. Pollutant: Visible Emissions

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emission may not exceed 20% opacity with the following exceptions: (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. [s. NR 431.05 (1) and (2), Wis. Adm. Code] 	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)1., Wis. Adm. Code]

- BE. Process P99E, Stack S99E Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated $50 \le \mathrm{HP} \le 3000$): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007
- 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM)

a. Limitations

- (1) Owner or operators of 2007 model year or later emergency stationary compression ignition (CI) internal combustion engines (ICE) with a maximum engine power greater than or equal to 37KW (50 HP) and less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR §89.112 and 40 CFR §89.113 for all pollutants beginning model year 2007.
 - (a) Pursuant to 40 CFR §89.112(a), exhaust emissions from nonroad engines shall not exceed the following emission standards:
 - For model year 2007 nonroad engines with a power rating of greater than or equal to 37 KW (50 HP) and less than 75 KW (100 HP) the applicable exhaust emissions standards are (Tier 2).
 - (i) Non-methane Hydrocarbons and Nitrogen Oxides and (combined): 7.5 g/KW-hr (5.6 g/HP-hr).
 - (ii) Carbon Monoxide: 5.0 g/KW-hr (3.7 g/HP-hr).
 - (iii) Particulate Matter: 0.40 g/KW-hr (0.30 g/HP-hr).

b. Compliance Demonstration

- (1) The owners and operators must use diesel fuel that meets the requirements of 40 CFR §80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Pursuant to 40 CFR §80.510(b)(1)(i), the sulfur content for nonroad diesel fuel may not exceed 15 ppm (0.0015 percent by weight). [40 CFR §§ 60.4207(b) and 80.510(b)(1)(i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (2) The following deadlines exist for importing or installing engines produced in previous model years:
 - (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
 - (b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (1) The permittee keep a record of the types of fuels purchased for each engine (generator). The records shall identify the fuel as either ultra-low sulfur diesel fuel oil or identify the sulfur content of the oil, as delivered to the storage tank for the engine. [ss. NR 407.09 (2)(d) and (4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
- (2) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The maintenance activities performed, including any inspections and part replacements;
 - (b) A copy of the manufacturer's emissions-related written instructions;
 - (c) A copy of the engine's certification;
 - (d) If equipped with a diesel particulate filter, backpressure measurements and any corrective action taken if the high backpressure limit is approached or exceeded;
 - (e) The hours of operation, including the classifications of these hours (purpose of use);
 - (f) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) for each calendar month;
 - (g) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) year-to-date for each calendar month;
 - (h) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and
 - (i) The total non-emergency hours of operation

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BE. Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated $50 \le HP \le 3000$): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM)

a. Limitations

For model year 2008 and later nonroad engines a with power rating of greater than or equal to 37 KW (50 HP) and less than 75 KW (100 HP) the applicable exhaust emissions standards are (Tier 3).

- (i) Non-methane Hydrocarbons and Nitrogen Oxides and (combined): 4.7 g/KW-hr (3.5 g/HP-hr).
- (ii) Carbon Monoxide: 5.0 g/KW-hr (3.7 g/HP-hr).
- (iii) Particulate Matter: 0.40 g/KW-hr (0.30 g/HP-hr).

For model year 2007 and later nonroad engines a with power rating of greater than or equal to 75 KW (100 HP) and less than 130 KW (175 HP) the applicable exhaust emissions standards are (Tier 3).

- (i) Non-methane Hydrocarbons and Nitrogen Oxides and (combined): 4.0 g/KW-hr (3.0 g/HP-hr).
- (ii) Carbon Monoxide: 5.0 g/KW-hr (3.7 g/HP-hr).
- (iii) Particulate Matter: 0.30 g/KW-hr (0.22 g/HP-hr).

For model year 2007 and later nonroad engines a with power rating of greater than or equal to 130 KW (175 HP) and

b. Compliance Demonstration

It is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified above after the dates specified. These requirements do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. [40 CFR §§ 60.4208 (a), (b), (h) and (i), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]

- (3) You must comply by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b), for the same model year and maximum engine power. Over the entire life of the engine, the engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of 40 CFR §60.4211 (Condition (5), below). [40 CFR §8 60.4206 and 60.4211(c), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (4) You must over the entire life of the engine do all of the following, except as permitted under paragraph (g) of 40 CFR §60.4211

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

(<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.

If the permittee fails to configure, maintain, and operate an engine (generator) according to the manufacturer's emission-related specifications or instructions, the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours, and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [40 CFR §§ 60.4214 (b) and (c) and 60.4211(g) (1) and (2), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

- (3) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in 40 CFR §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d) (1) through (3) of 40 CFR § 60.4214 (paragraphs (a) through (c), below).
 - (a) The report must contain the following information:
 - (i) Company name and address where the engine is located;
 - (ii) Date of the report and beginning and ending dates of the reporting period;

- BE. Process P99E, Stack S99E Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated $50 \le \mathrm{HP} \le 3000$): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007
- 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO_x), Hydrocarbon (C), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and/or Particulate Matter (PM)

less than or equal to 560 KW (750 HP) the applicable exhaust emissions standards are (Tier 3).

- (i) Non-methane Hydrocarbons and Nitrogen Oxides and (combined): 4.0 g/KW-hr (3.0 g/HP-hr).
- (ii) Carbon Monoxide: 3.5 g/KW-hr (2.6 g/HP-hr).
- (iii) Particulate Matter: 0.20 g/KW-hr (0.15 g/HP-hr).
- (b) Pursuant to 40 CFR §89.113 (a) and (c), exhaust opacity from compression ignition nonroad engines must not exceed the following:
 - (i) 20 percent during acceleration mode,
 - (ii) 15 percent during the lugging mode, and
 - (iii) 50 percent during peaks in either acceleration or lugging modes.Constant-speed engines are exempt from these opacity standards.

[40 CFR §§ 60.4205(b), 60.4202(a)(2), 89.112 and 89.113, s. 285.65(13), Wis. Stats. (NSPS)]

b. Compliance Demonstration

(Condition (5), below):

- (a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
- (b) Change only those emission-related settings that are permitted by the manufacturer; and
- (c) Meet the requirements of 40 CFR parts 89 (Control of Emissions from New and In-use Nonroad CI Engines) and/or 1068 (General Compliance Provisions for Highway, Stationary, and Nonroad Programs), as they apply to you.
- [40 CFR §§ 60.4206 and 60.4211(a), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (5) If you do not operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance according to 40 CFR §60.4211(g) (1) through (3), as appropriate. [40 CFR §§ 60.4206 and 60.4211(g), s. 285.65(13), Wis. Stats., and s. NR

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (iii) Engine site rating and model year;
- (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place;
- (v) Hours spent for operation for the purposes specified in 40 CFR §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (b) Each annual report must cover the just completed calendar year and must be submitted no later than March 31 of the current year.
- (c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR §60.4.

[40 CFR § 60.4214(d), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

BE. Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, $\overline{2006}$ and equipped with engines manufactured in 2007 or later and rated $50 \le HP \le 3000$): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007

Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(6) If you own or operate an emergency	
	stationary ICE, you must operate the	
	emergency stationary ICE according to the	
	requirements in paragraphs (f) (1) through	
	(3) of 40 CFR §60.4211 (paragraphs (a)	
	through (c), below). In order for the engine to be considered an emergency stationary	
	ICE under 40 CFR part 60, subpart IIII, any	
	operation other than emergency operation,	
	maintenance and testing, and operation in	
	non-emergency situations for 50 hours per	
	year, as described in paragraphs (f) (1)	
	through (3) of 40 CFR §60.4211	
	(paragraphs (a) through (c), below), is	
	prohibited. If you do not operate the engine	
	according to the requirements in paragraphs	
	(f) (1) through (3) of 40 CFR §60.4211	
	(paragraphs (a) through (c), below), the	
	engine will not be considered an emergency	
	engine under this subpart and must meet all	
	requirements for non-emergency engines.	
	(a) There is no time limit on the use of	
	emergency stationary ICE in emergency situations. ³²	
	(b) You may operate your emergency	
	stationary ICE for any combination of	

³² Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

BE. Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, $\overline{2006}$ and equipped with engines manufactured in 2007 or later and rated $50 \le HP \le 3000$): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007

Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	the purposes specified in paragraph (f)(2)(i) of 40 CFR §60.4211 (paragraph (i), below) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of 40 CFR §60.4243 (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (f)(2) of §60.4211). (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the 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	

³³ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*).

I	BE.	Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines
		manufactured in 2007 or later and rated 50 ≤ HP ≤ 3000): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther
		85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184
		kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007

Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	local standards require maintenance	
	and testing of emergency ICE	
	beyond 100 hours per calendar year.	
	(c) Emergency stationary ICE may be	
	operated for up to 50 hours per calendar	
	year in non-emergency situations. The	
	50 hours of operation in non-emergency	
	situations are counted as part of the 100	
	hours per calendar year for maintenance	
	and testing provided in paragraph (f)(2)	
	of §60.4211 (paragraph (b), above).	
	Except as provided in paragraph (f)(3)(i)	
	of §60.4211 (paragraph (i), below), the	
	50 hours per year for non-emergency	
	situations cannot be used for peak	
	shaving or non-emergency demand	
	response, or to generate income for a	
	facility to an electric grid or otherwise	
	supply power as part of a financial	
	arrangement with another entity.	
	(i) The 50 hours per year for non-	
	(i) The 50 hours per year for non- emergency situations can be used to	
	supply power as part of a financial	
	arrangement with another entity if all	
	of the following conditions are met:	
	(A) The engine is dispatched by the	
	local balancing authority or local	
	transmission and distribution	
	system operator;	
	system operator,	

]	BE.	Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines
		manufactured in 2007 or later and rated 50 ≤ HP ≤ 3000): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther
		85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184
		kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007

Methane Hydrocarbon (NMHC and Nitrogen	Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(B) The dispatch is intended to	
	mitigate local transmission	
	and/or distribution limitations so	
	as to avert potential voltage	
	collapse or line overloads that	
	could lead to the interruption of	
	power supply in a local area or	
	region.	
	(C) The dispatch follows reliability,	
	emergency operation or similar	
	protocols that follow specific	
	NERC, regional, state, public	
	utility commission or local	
	standards or guidelines.	
	(D) The power is provided only to	
	the facility itself or to support	
	the local transmission and	
	distribution system.	
	(E) The owner or operator identifies	
	and records the entity that	
	dispatches the engine and the	
	specific NERC, regional, state,	
	public utility commission or	
	local standards or guidelines that	
	are being followed for	
	dispatching the engine. The	
	local balancing authority or local	
	transmission and distribution	
	system operator may keep these	
	records on behalf of the engine	
	owner or operator.	

BE. Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated 50 ≤ HP ≤ 3000): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther				
85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007				
3. Pollutants regulated by the Standards of Performance of Perform	3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements		
	[40 CFR §§ 60.4211(f) and 60.4219, s. 285.65 (30 and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]			
	(7) If the emergency stationary CI internal combustion engine (generator) does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine. [40 CFR § 60.4209(a),			
	s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]			
	(8) If the emergency stationary CI internal combustion engine (generator) equipped with a diesel particulate filter to comply with the emission standards in 40 CFR \$60.4204, the diesel particulate filter must			
	be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR § 60.4209(b), s.			
	285.65 (3) and (13), Wis. Stats., and sd. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]			
	(9) The permittee shall track all hours of operation for each engine (generator). The permittee must identify how many hours are			

spent for emergency operation, including

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BE. Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated 50 ≤ HP ≤ 3000): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007			
·	• • •	nal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-(NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM)	
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
	what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (10) At the end of each month, the permittee shall determine the following for each engine (generator):		
	(a) The total hours of non-emergency operation (excluding maintenance and readiness testing) for the just completed		

month;

(b) The total hours of non-emergency

(d) The total hours of non-emergency

[s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]

calendar month; and

operation (<u>excluding</u> maintenance and readiness testing) year-to-date for the just completed calendar month; (c) The total hours of non-emergency

operation (<u>including</u> maintenance and readiness testing) for the just completed

operation (<u>including</u> maintenance and readiness testing) year-to-date for the just completed calendar month.

	BE. Process P99E, Stack S99E – Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated 50 ≤ HP ≤ 3000): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007			
	3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR part 60, subpart JJJJ] - Non-Methane Hydrocarbon (NMHC and Nitrogen Oxides (NO _x), Hydrocarbon (C), Nitrogen Oxides (NO _x), Carbon Monoxide (CO), and/or Particulate Matter (PM) a. Limitations b. Compliance Demonstration c. Reference Test Methods, Recordkeeping and Monitoring Requirements			

- BE. Process P99E, Stack S99E Eight (8) Campus Diesel-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured in 2007 or later and rated $50 \le HP \le 3000$): Laurentide 200 kW (268 HP), mfg. 2012; McGraw 180 kw (241 HP), mfg. 2009; Winther 85 kW (114 HP), mfg. 2012; Starin 240 kW (322 HP), mfg. 2009; Benson 50 kW (67 HP), mfg. 2007; Lee 80 kW (107 HP), mfg. 2007; Goodhue 184 kW (247 HP), mfg. 2013; and Knilans 80 kW (107 HP), mfg. 2007
- 4. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63 subpart ZZZZ] Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) An affected source that is a new or reconstructed stationary RICE located at an area source or a new or reconstructed emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements in 40 CFR part 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart IIII for compression ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40 CFR §63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (GACT)]	(1) The compliance demonstration requirements for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	(1) The monitoring and recordkeeping requirements for the NSPS in subsection 3.c., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR §63.6590(c) (1) and (6), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

BF. Process P99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (Installed before June 12, 2006): Ambrose 20 kW (27 HP), Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)

1. Pollutant: Particulate Matter			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
(1) Ambrose and Heide Generators. Emissions may not 0.60 pounds per million Btu heat input from any stack associated with an engine (generator) installed, constructed or last modified on or before April 1, 1972 [s. NR 415.06(1)(a), Wis. Adm. Code] (2) Andersen, Hyer, Williams Center and Esker Generators. Emissions may not exceed 0.15 pounds of particulate matter per million Btu heat input from any stack associated with an engine (generator) installed, constructed or last modified after April 1, 1972 [s. NR 415.06(2)(a), Wis. Adm. Code] (3) Andersen, Hyer, Williams Center and Esker Generators. For emergency generators claiming a construction permit exemption under s. NR 406.04(1)(w), Wis.	(1) Each engine (generator) shall burn only natural gas or propane. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (2) The permittee shall track each engine's (generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) At the end of each month, the permittee shall for each engine (generator) claiming a construction permit exemption under s. NR 406.04(1)(w), Wis. Adm. Code, determine its total hours of operation for the just completed month and its total hours of operation over the 12 most recent consecutive calendar month period. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	1 0	
exemption under s. NR 406.04(1)(w), Wis. Adm. Code, the permittee shall limit the hours of operation for each engine (generator) to no more than 200 hours in any 12 consecutive calendar month period. [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code]			

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BF. Process P99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (Installed before June 12, 2006): Ambrose 20 kW (27 HP), Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)		
(20 HP), Hyer 39 kW (52 HP), Williams Center	OU KW (OU HP) and ESKET 15 KW (20 HP)	
b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	Requirements (1) The monitoring and recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]	
	b. Compliance Demonstration (1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm.	

BF. Process P99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (Installed before June 12, 2006): Ambrose 20 kW (2	7 HP),
Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)	
	·

Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)			
2. Pollutant: Visible Emissions			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 40% opacity for stated periods of time.			
[ss. NR 431.04(2) and NR 431.05 (1) and (2), Wis. Adm. Code]			

BF. Process P99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (Installed before June 12, 2006): Ambrose 20 kW (27 HP), Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)

3. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations

(1) Existing Institutional Emergency RICE. Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in 40 CFR §63.6640(f)(4)(ii) are not subject to 40 CFR 63, subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR §63.6675, which includes operating according to the provisions specified in 40 CFR §63.6640(f). [40 CFR §8 63.6585(f)(3) and 63.6590(a)(1)(iii), s. 285.65(13), Wis. Stats. (GACT)]

b. Compliance Demonstration

- (1) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (1), (2) and (4) of 40 CFR §63.6640(f) (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary RICE under 40 CFR 63, subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1), (2) and (4) of 40 CFR §63.6640(f) (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (1), (20 and (4) of 40 CFR §63.6640(f) (paragraphs (a) through (c), below), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
 - (a) There is no time limit on the use of emergency stationary RICE in emergency situations. ³⁴
 - (b) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraph (i) of 40 CFR §63.6640(f)(2) (paragraph (i), below) for a maximum of 100 hours per calendar year.³⁵ Any operation for non-

- **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
- (1) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The hours of operation, including the classifications of these hours (purpose of use);
 - (b) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
 - (c) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) year-to-date for each calendar month;
 - (d) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and
 - (e) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.

If the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, 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. and NR 439.04(1)(d), Wis. Adm. Code]

³⁴ Although unlimited engine (generator) use is authorized under the RICE during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

³⁵ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl.*

BF. Process P99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (Installed before June 12, 2006): Ambrose 20 kW (27 HP), Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)

[40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	emergency situations as allowed by paragraph (4) of 40 CFR §63.6640(f) (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (f)(2) of 40 CFR §63.6640).	
	(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the 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 calendar year.	
	(c) Emergency stationary ICE located at area sources may be operated for up to 50 hours per calendar year in non-	

BF.	Process P99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (Installed before June 12, 2006): Ambrose 20 kW (27 HP),
	Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)

[40 CFR 63 subpart ZZZZ] - Federal Hazardous Air Pollutants (Federal HAP)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	emergency situations. The 50 hours of	
	operation in non-emergency situations	
	are counted as part of the 100 hours per	
	calendar year for maintenance and	
	testing provided in paragraph (f)(2) of 40	
	CFR §63.6640 (paragraph (b), above). The 50 hours per year for non-	
	emergency situations cannot be used for	
	peak shaving or non-emergency demand	
	response, or to generate income for a	
	facility to an electric grid or otherwise	
	supply power as part of a financial	
	arrangement with another entity.	
	[40 CFR §§ 63.6585(f), 63.6590(a)(1)(iii),	
	63.6640(f) and 63.6675, and s. 285.65(13),	
	Wis. Stats. (GACT)]	
	(2) The permittee shall track all hours of	
	operation for each engine (generator). The	
	permittee must identify how many hours are	
	spent for emergency operation, including	
	what classified the hours as emergency operation (purpose of use), and how many	
	hours are spent for non-emergency	
	operation, including what classified the	
	hours as non-emergency operation (purpose	
	of use). [s. 285.65(3), Wis. Stats., and s. NR	
	407.09(4)(a)3.b., Wis. Adm. Code]	
	(3) At the end of each month, the permittee	
	shall determine the following for each	
	engine (generator):	

BF.	Process P99F, Stack S99F – Six (6) Campus Natural Gas-Fired Emergency Generators (Installed before June 12, 2006): Ambrose 20 kW (27 HP),
	Andersen 35 kW (47 HP), Heide 15 kW (20 HP), Hyer 39 kW (52 HP), Williams Center 60 kW (80 HP) and Esker 15 kW (20 HP)

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	 (a) The total hours of non-emergency operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month; (c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] 	

BG. Process P99G, Stack S99G – Two (2) Campus Natural Gas-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured before January 1, 2009): Hyland 230 kW (308 HP), mfg. 2007 and Roseman 20 kW (27 HP), mfg. 2008

manufactured before January 1, 2009): Hyland 230 kW (308 HP), mfg. 2007 and Roseman 20 kW (27 HP), mfg. 2008		
1. Pollutant: Particulate Matter		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions from the stack may not exceed 0.15 pounds of particulate matter per million Btu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code] (2) The permittee shall limit the hours of	 (1) The engine (generator) shall burn only natural gas. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (2) The permittee shall track the engine's (generator's) hours of operation. [s. 205.65(2), Wis. State. and a NR. 	 (1) The permittee shall maintain and have available documentation showing natural gas is the only fuel burned by the engine (generator). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code] (2) The permittee shall maintain and have available the
operation for the engine (generator) to no more than 200 hours in any 12 consecutive calendar month period [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code]	285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) At the end of each month, the permittee shall determine for the engine (generator) its total hours of operation for the just completed month and the total hours of operation over the previous [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	following records for the engine (generator): (a) The total hours of operation for the calendar month: and (b) The total hours of operation for the 12 consecutive calendar month period. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

BG. Process P99G, Stack S99G – Two (2) Campus Natural Gas-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured before January 1, 2009): Hyland 230 kW (308 HP), mfg. 2007 and Roseman 20 kW (27 HP), mfg. 2008 2. Pollutant: Visible Emissions

2. Pollutant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emission may not exceed 20% opacity with the following exceptions: (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. [s. NR 431.05 (1) and (2), Wis. Adm. Code] 	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)1., Wis. Adm. Code]

BG. Process P99G, Stack S99G – Two (2) Campus Natural Gas-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured before January 1, 2009): Hyland 230 kW (308 HP), mfg. 2007 and Roseman 20 kW (27 HP), mfg. 2008

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)

a. Limitations

(1) Emergency ICE Requirements. The provisions of 40 CFR part 60, subpart JJJJ are applicable to the owner and operator of a stationary SI ICE that commences construction after June 12, 2006, where the stationary emergency SI ICE is manufactured on or after January 1, 2009. By definition, "All emergency stationary ICE must comply with the requirements specified in §60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4243(d), then it is not considered to be an emergency stationary ICE under this subpart." [40 CFR §§ 60.4230(a)(4)(iv) and 60.4248, and s. 285.65(13), Wis. Stats. (NSPS)]

b. Compliance Demonstration

- (1) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary ICE under 40 CFR part 60, subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. ³⁶
 - (b) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (d)(2)(i) of 40 CFR §60.4243 (paragraph

- **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
- (1) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The hours of operation, including the classifications of these hours (purpose of use);
 - (b) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
 - (c) The total non-emergency hours of operation (<u>excluding</u> maintenance and readiness testing) year-to-date for each calendar month;
 - (d) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and
 - (e) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.

If the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

³⁶ Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

BG. Process P99G, Stack S99G – Two (2) Campus Natural Gas-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured before January 1, 2009): Hyland 230 kW (308 HP), mfg. 2007 and Roseman 20 kW (27 HP), mfg. 2008

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(i), below) for a maximum of 100 hours	1
	per calendar year. ³⁷ Any operation for	
	non-emergency situations as allowed by	
	paragraph (d)(3) of 40 CFR §60.4243	
	(paragraph (c), below) counts as part of	
	the 100 hours per calendar year allowed	
	by this paragraph (paragraph (d)(2) of	
	§60.4243).	
	(i) Emergency stationary ICE may be	
	operated for maintenance checks and	
	readiness testing, provided that the	
	tests are recommended by federal,	
	state or local government, the	
	manufacturer, the vendor, the	
	regional transmission organization or	
	equivalent balancing authority and	
	transmission operator, or the	
	insurance company associated with	
	the engine. The owner or operator	
	may petition the 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 ICE beyond 100 hours	
	per calendar year.	
	por caronaar jour.	

³⁷ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*).

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	mpus Natural Gas-Fired Emergency Generators Hyland 230 kW (308 HP), mfg. 2007 and Rosem	s (Installed after June 12, 2006 and equipped with engines ann 20 kW (27 HP), mfg. 2008
3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (d)(2) of \$60.4243 (paragraph (b), above). Except as provided in paragraph (d)(3)(i) of \$60.4243 (paragraph (i), below), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that	

BG. Process P99G, Stack S99G – Two (2) Campus Natural Gas-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines
manufactured before January 1, 2009): Hyland 230 kW (308 HP), mfg. 2007 and Roseman 20 kW (27 HP), mfg. 2008

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	could lead to the interruption of	
	power supply in a local area or	
	region.	
	(C) The dispatch follows reliability,	
	emergency operation or similar	
	protocols that follow specific NERC, regional, state, public	
	utility commission or local	
	standards or guidelines.	
	(D) The power is provided only to	
	the facility itself or to support	
	the local transmission and	
	distribution system.	
	(E) The owner or operator identifies	
	and records the entity that	
	dispatches the engine and the	
	specific NERC, regional, state,	
	public utility commission or	
	local standards or guidelines that are being followed for	
	dispatching the engine. The	
	local balancing authority or local	
	transmission and distribution	
	system operator may keep these	
	records on behalf of the engine	
	owner or operator.	
	[40 CFR §§ 60.4243(d) and 60.4248, s.	
	285.65(13), Wis. Stats., and s. NR	
	407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(2) The permittee shall track all hours of	
	operation for each engine (generator). The	

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	mpus Natural Gas-Fired Emergency Generators Hyland 230 kW (308 HP), mfg. 2007 and Rosem	s (Installed after June 12, 2006 and equipped with engines nan 20 kW (27 HP), mfg. 2008
3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) At the end of each month, the permittee shall determine the following for each engine (generator): (a) The total hours of non-emergency operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month; (c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month.	
	107.00(1)(1)21. W. 11. G. 13.	

407.09(4)(a)3.b., Wis. Adm. Code]

BG. Process P99G, Stack S99G – Two (2) Campus Natural Gas-Fired Emergency Generators (Installed after June 12, 2006 and equipped with engines manufactured before January 1, 2009): Hyland 230 kW (308 HP), mfg. 2007 and Roseman 20 kW (27 HP), mfg. 2008

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) An affected source that is a new or reconstructed stationary RICE located at an area source or a new or reconstructed emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements in 40 CFR part 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart JJJJ for spark ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40 CFR §§ 63.6585 (a), (b) and (c), 63.6590(2) and (3), 63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (GACT)]	(1) The compliance demonstration requirements for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR § 63.6590(c) (1) and (6), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	(1) The monitoring and recordkeeping requirements for the NSPS in subsection 3.c., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR § 63.6590(c) (1) and (6), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

1. Pollutant: Particulate Matter c. Reference Test Methods, Recordkeeping and Monitoring **a.** Limitations **b.** Compliance Demonstration Requirements (1) The permittee shall maintain and have available (1) Emissions from the stack may not exceed (1) The engine (generator) shall burn only natural gas. [s. 285.65(3), Wis. Stats., and s. 0.15 pounds of particulate matter per documentation showing natural gas is the only fuel burned million Btu heat input. [s. NR 415.06(2)(a), NR 407.09(4)(a)3.b., Wis. Adm. Code] by the engine (generator). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code] Wis. Adm. Code] (2) The permittee shall track the engine's (2) The permittee shall limit the hours of (generator's) hours of operation. [s. (2) The permittee shall maintain and have available the operation for the engine (generator) to no 285.65(3), Wis. Stats., and s. NR following records for the engine (generator): more than 200 hours in any 12 consecutive 407.09(4)(a)3.b., Wis. Adm. Code] calendar month period [ss. NR 400.02 and (a) The total hours of operation for the calendar month: NR 406.04(1)(w), Wis. Adm. Code] (3) At the end of each month, the permittee shall determine for the engine (generator) its (b) The total hours of operation for the 12 consecutive total hours of operation for the just calendar month period. completed month and the total hours of operation over the previous [s. 285.65(3), [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Code1 Adm. Code]

BH. Process P99H, Stack S99H – One (1) Campus Natural Gas-Fired Emergency Generator (Equipped with an engine manufactured on or after

January 1, 2009 and rated 25 < HP < 100 HP): Center of the Arts 45 kW (60 HP), mfg. 2012			
2. Pollutant: Visible Emissions			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
 (1) Emission may not exceed 20% opacity with the following exceptions: (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. 	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)1., Wis. Adm. Code]	
[s. NR 431.05 (1) and (2), Wis. Adm. Code]			

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)

a. Limitations

- (1) The owners and operators of stationary SI engines with a maximum engine power greater than or equal to 25 (19 KW) and less than 100 HP (75 KW), except gasoline or rich burn engines that use LPG, must comply with the following emissions standards:
 - (a) Nitrogen Oxides and Hydrocarbons (combined): 10 grams per horsepower hour (g/HP-hr).
 - (b) Carbon Monoxide: 387 grams per horsepower hour (g/HP-hr).

Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to 40 CFR60, subpart JJJJ applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards. [40 CFR § 60.4233(d) and Table 1 and s. 285.65(13), Wis. Stats. (NSPS)]

b. Compliance Demonstration

- (1) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of 40 CFR §60.4233. ³⁸ [40 CFR § 60.4243(e), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (2) The owner or operator of a stationary SI internal combustion engine (generator) must demonstrate compliance with the applicable emission limitations according to one of the methods specified in 40 CFR §63.4243(b) (1) and (2). One compliance demonstration method includes purchasing an engine certified according to the procedures specified in this 40 CFR part 60, subpart JJJJ and operating and maintaining the certified engine according to the manufacturer's emission-related written instructions. [40 CFR §§ 60.4234 and 60.4243(b)(1), s. 285.65(13), Wis. Stats... and NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)1

- **c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
- (1) When performance testing is required for demonstrating compliance, owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of 40 CFR §60.4244. [40 CFR § 60.4244, s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.06(8), Wis. Adm. Code]
- (2) If propane is used to operate any of the engines (generators), the permittee must identify purpose of the emergency for using propane and for each engine using propane track its hours of operation while using propane. The use of propane by any engine shall be reported to the Department. [40 CFR § 60.4243(e), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
- (3) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) The maintenance activities performed, including any inspections and part replacements;
- (b) A copy of the manufacturer's emissions-related written instructions;
- (c) A copy of the manufacture's certification;
- (d) The hours of operation, including the classifications of these hours (purpose of use);
- (e) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
- (f) The total non-emergency hours of operation (excluding maintenance and readiness testing) year-to-

³⁸ Section 60.4243(e) of the NSPS provides for the limited use of propane during emergency operations, but the use of propane maybe restricted elsewhere in the permit.

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)			
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements	
	 (3) If you operate and maintain the certified stationary SI internal combustion engine according to the manufacturer's emission-related written instructions, the owner or operator of the engine (generator) must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The owner or operator must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. [40 CFR §§ 60.4243 (a)(1) and (b)(1), s. 285.65(13), Wis. Stats., and NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (4) If you do not operate and maintain the certified stationary SI internal combustion engine according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and the owner or operator must demonstrate compliance according to 40 CFR §60.4243(a)(2)(i). Pursuant to 40 CFR §63.4243(a)(2)(i), you must keep a maintenance plan and records of conducted maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for 	date for each calendar month; (g) The total non-emergency hours of operation (including maintenance and readiness testing) for each calendar month; and (h) The total non-emergency hours of operation (including maintenance and readiness testing) year-to-date for each calendar month. If the permittee fails to configure, maintain, and operate an engine (generator) according to the manufacturer's emission-related specifications or instructions, the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours, and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [40 CFR §§ 60.4245 (a) (2) & (3) and (b) and 60.4243(a)(1), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]	

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
a. Limitations	minimizing emissions, but no performance testing is required if you are an owner or operator. [40 CFR § 60.4234 and 60.4243 (a)(2)(i) and (b)(1), s. 285.65(13), Wis. Stats., and NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (5) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary ICE under 40 CFR part 60, subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(a) There is no time limit on the use of emergency stationary ICE in emergency situations. ³⁹	

³⁹ Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(b) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (d)(2)(i) of 40 CFR §60.4243 (paragraph (i), below) for a maximum of 100 hours per calendar year. ⁴⁰ Any operation for non-emergency situations as allowed by paragraph (d)(3) of 40 CFR §60.4243 (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (d)(2) of §60.4243).	
	(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the 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	

regulations

⁴⁰ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*).

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.	
	(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (d)(2) of \$60.4243 (paragraph (b), above). Except as provided in paragraph (d)(3)(i) of \$60.4243 (paragraph (i), below), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.	
	(i) The 50 hours per year for non- emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:	
	(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;(B) The dispatch is intended to	

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
a. Limitations	mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. (D) The power is provided only to the facility itself or to support the local transmission and distribution system. (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that	
	are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [40 CFR §§ 60.4243(d) and 60.4248, s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] - Carbon

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	(6) If the emergency stationary SI internal combustion engine (generator) does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine. [40 CFR § 60.4237(c), s. 285.65(13), Wis. Stats., and NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(7) The permittee shall track all hours of operation for each engine (generator). The permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	
	(8) At the end of each month, the permittee shall determine the following for each engine (generator):	
	(a) The total hours of non-emergency operation (excluding maintenance and readiness testing) for the just completed month;(b) The total hours of non-emergency	
	operation (<u>excluding</u> maintenance and readiness testing) year-to-date for the just completed calendar month;	

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC)		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	 (c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] 	

4. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (40 CFR 63 subpart ZZZZ) - Federal Hazardous Air Pollutants (Federal HAP)

c. Reference Test Methods, Recordkeeping and Monitoring **b.** Compliance Demonstration **a.** Limitations Requirements (1) The monitoring and recordkeeping requirements for the (1) An affected source that is a new or (1) The compliance demonstration requirements NSPS in subsection 3.c., above, shall be used to reconstructed stationary RICE located at an for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 demonstrate compliance with 40 CFR part 63, subpart area source or a new or reconstructed emergency stationary RICE with a site CFR part 63, subpart ZZZZ (RICE). [40 ZZZZ (RICE). [40 CFR § 63.6590(c) (1) and (6), s. rating of less than or equal to 500 brake HP CFR § 63.6590(c) (1) and (6), s. 285.65 (3) 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR located at a major source of HAP emissions and (13), Wis. Stats., and s. NR 439.04(1)(d), Wis. Adm. Code (GACT)] must meet the requirements in 40 CFR part 407.09(4)(a)3.b., Wis. Adm. Code (GACT)] 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart JJJJ for spark ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40 CFR §§ 63.6585 (a), (b) and (c), 63.6590(2) and (3), 63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (GACT)]

BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012

Drumlin 150 kW (201 HP), mfg. 2012		
1. Pollutant: Particulate Matter	1. Pollutant: Particulate Matter	
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions from the stack may not exceed 0.15 pounds of particulate matter per million Btu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code]	 (1) The engine (generator) shall burn only natural gas. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (2) The permittee shall track the engine's 	(1) The permittee shall maintain and have available documentation showing natural gas is the only fuel burned by the engine (generator). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
(2) The permittee shall limit the hours of operation for the engine (generator) to no more than 200 hours in any 12 consecutive calendar month period [ss. NR 400.02 and NR 406.04(1)(w), Wis. Adm. Code]	(generator's) hours of operation. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) At the end of each month, the permittee shall determine for the engine (generator) its total hours of operation for the just completed month and the total hours of operation over the previous [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	 (2) The permittee shall maintain and have available the following records for the engine (generator): (a) The total hours of operation for the calendar month: and (b) The total hours of operation for the 12 consecutive calendar month period. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]

BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January
1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and
Drumlin 150 kW (201 HP), mfg. 2012

	Emissions

2. Polititant: Visible Emissions		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
 (1) Emission may not exceed 20% opacity with the following exceptions: (a) When starting up, the emissions from an engine may not exceed 80% opacity for 6 minutes in any one hour. No more than three engine starts with emissions exceeding 20% opacity are allowed. (b) During engine testing, emergency use, or other good cause, as permitted by the Department, provided no hazard or unsafe conditions arise, an engine's emissions may exceed 20% opacity for stated periods of time. [s. NR 431.05 (1) and (2), Wis. Adm. Code] 	(1) The compliance demonstration requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) The recordkeeping requirement in condition (1) for particulate matter shall be used to demonstrate compliance with the applicable limit. [s. 285.65(3), Wis. Stats., and s. NR 407.09(4)(a)1., Wis. Adm. Code]

- BI. Process P99I, Stack S99I Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012
- 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] *Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC) –

a. Limitations

- (2) The owners and operators of stationary SI engines with a maximum engine power greater than or equal to 130HP, except gasoline or rich burn engines that use LPG, must comply with the following emissions standards:
 - (a) Nitrogen Oxides: 2.0 grams per horsepower hour (g/HP-hr) or 160 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen.
 - (b) Carbon Monoxide: 4.0 grams per horsepower hour (g/HP-hr) or 540 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen.
 - (c) Volatile Organic Compounds: 1.0 grams per horsepower hour (g/HP-hr) or 86 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen⁴¹.

For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable

b. Compliance Demonstration

- (1) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of 40 CFR §60.4233. ⁴² [40 CFR § 60.4243(e), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (2) The owner or operator of a stationary SI internal combustion engine (generator) must demonstrate compliance with the applicable emission limitations according to one of the methods specified in 40 CFR §63.4243(b) (1) and (2). Pursuant to 40 CFR §63.4243(b)(1), one of the compliance demonstration method is purchasing an engine certified according to the procedures specified in this 40 CFR part 60, subpart JJJJ and operating and maintaining the certified engine according to the manufacturer's emission-related written instructions. [40 CFR §§ 60.4234 and

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (1) When performance testing is required for demonstrating compliance, owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of 40 CFR §60.4244. [40 CFR § 60.4244, s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.06(8), Wis. Adm. Code]
- (2) If propane is used to operate any of the engines (generators), the permittee must identify purpose of the emergency for using propane and for each engine using propane track its hours of operation while using propane. The use of propane by any engine shall be reported to the Department. [40 CFR § 60.4243(e), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code]
- (3) The owner or operator shall maintain and have available records of the following items for each engine (generator):
 - (a) All notifications submitted to comply with 40 CFR part 60, subpart JJJJ and all documentation supporting any notification.
 - (b) The maintenance activities performed, including any inspections and part replacements;
 - (c) A copy of the manufacturer's emissions-related written instructions;
 - (d) A copy of the manufacture's certification;
 - (e) The hours of operation, including the classifications of these hours (purpose of use);

⁴¹ For purposes of 40 CFR part 60, subpart JJJJ, when calculating emissions of volatile organic compounds, emissions for formaldehyde should not be included.

⁴² Section 60.4243(e) of the NSPS provides for the limited use of propane during emergency operations, but the use of propane maybe restricted elsewhere in the permit.

- BI. Process P99I, Stack S99I Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated \geq 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012
- 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] *Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC) –

to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to 40 CFR part 60, subpart JJJJ, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified. [40 CFR § 60.4233(e) and Table 1 and s. 285.65(13), Wis. Stats. (NSPS)]

a. Limitations

b. Compliance Demonstration

- 60.4243(b)(1), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (3) If you operate and maintain the certified stationary SI internal combustion engine according to the manufacturer's emissionrelated written instructions, the owner or operator of the engine (generator) must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The owner or operator must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. [40 CFR §§ 60.4243 (a)(1) and (b)(1), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]
- (4) If you do not operate and maintain the certified stationary SI internal combustion engine according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and the owner or operator must demonstrate compliance according to 40 CFR \$60.4243(a)(2) (ii) or (iii), as appropriate. Pursuant to 40 CFR \$60.4243(a)(2)(ii), If you are an owner or

c. Reference Test Methods, Recordkeeping and Monitoring Requirements

- (f) The total non-emergency hours of operation (excluding maintenance and readiness testing) for each calendar month;
- (g) The total non-emergency hours of operation (excluding maintenance and readiness testing) year-to-date for each calendar month;
- (h) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) for each calendar month; and
- (i) The total non-emergency hours of operation (<u>including</u> maintenance and readiness testing) year-to-date for each calendar month.

If the permittee fails to configure, maintain, and operate an engine (generator) according to the manufacturer's emission-related specifications or instructions, the monthly year-to-date total non-emergency hours of operation (excluding maintenance and readiness testing) for any engine (generator) exceeds 50 hours, and/or the monthly year-to-date total non-emergency hours of operation (including maintenance and readiness testing) for any engine (generator) exceeds 100 hours, the permittee shall notify the Department in writing within 30 days from the date of determining the event occurred. [40 CFR §§ 60.4245 (a) (2) & (3) and (b) and 60.4243(a)(1), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

(4) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in 40 CFR §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1)

BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January
1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and
Drumlin 150 kW (201 HP), mfg. 2012

3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] *Carbon

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC) –		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP,	through (3) of 40 CFR §60.4245 (paragraphs (a) through (c), below).
	you must keep a maintenance plan and records of conducted maintenance and must,	(a) The report must contain the following information:
	to the extent practicable, maintain and operate the engine in a manner consistent	(i) Company name and address where the engine is located.
	with good air pollution control practice for minimizing emissions. In addition, you must	(ii) Date of the report and beginning and ending dates of the reporting period.
	conduct an initial performance test within 1 year of engine startup to demonstrate compliance. Pursuant to 40 CFR	(iii) Engine site rating and model year.(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
	§60.4243(a)(2)(iii), If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you	(v) Hours spent for operation for the purposes specified in 40 CFR §60.4243(d)(3)(i), including the date, start time, and end time for engine
	must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the	operation for the purposes specified in 40 CFR §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the
	engine in a manner consistent with good air pollution control practice for minimizing	situation that necessitated the dispatch of the engine.
	emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent	(b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31,
	performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to	2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the
	demonstrate compliance. [40 CFR § 60.4234 and 60.4243 (a)(2) (ii) and (iii) and	following calendar year. (c) The annual report must be submitted electronically
	(b)(1), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data
	(5) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the	Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written
	emergency stationary ICE according to the	in CEDKI at the time that the report is due, the written

BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated \geq 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	requirements in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below). In order for the engine to be considered an emergency stationary ICE under 40 CFR part 60, subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below), is prohibited. If you do not operate the engine according to the requirements in paragraphs (d) (1) through (3) of 40 CFR §60.4243 (paragraphs (a) through (c), below), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (b) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (d)(2)(i)(iii) of 40 CFR §60.4243 (paragraph (i), below) for a maximum of 100 hours per calendar year. 44 Any	report must be submitted to the Administrator at the appropriate address listed in 40 CFR §60.4. [40 CFR §60.4245(e), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (NSPS)]

⁴³ Although unlimited engine (generator) use is authorized under the NSPS (RICE) during emergency situations, the engine's (generator's) hours of operation may be restricted by state regulations.

⁴⁴ On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in the RICE NESHAP and NSPS (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*).

BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012		
	ormance (NSPS) for Stationary Spark Ignition Intercorations (HC) and/or Volatile Organic Compound	rnal Combustion Engines [40 CFR 60 subpart JJJJ] Carbon ds (VOC) –
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	operation for non-emergency situations as allowed by paragraph (d)(3) of 40 CFR §60.4243 (paragraph (c), below) counts as part of the 100 hours per calendar year allowed by this paragraph (paragraph (d)(2) of §60.4243). (i) Emergency stationary ICE may be	
	operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the	
	manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the	
	insurance company associated with the engine. The owner or operator may petition the 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 ICE beyond 100 hours per calendar year.	
	(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency	

1. 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] **Carbon Monoxide (CO), Nitrogen Oxides (NO,), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC) — a. Limitations			
a. Limitations b. Compliance Demonstration c. Reference Test Methods, Recordkeeping and Monitoring Requirements situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (d)(2) of \$60.4243 (paragraph (b), above). Except as provided in paragraph (d)(3)(i) of \$60.4243 (paragraph (d), below), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or	 1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] Carbon 		
situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (d)(2) of \$60.4243 (paragraph (b), above). Except as provided in paragraph (d)(3)(i) of \$60.4243 (paragraph (i), below), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or	, , , , , , , , , , , , , , , , , , ,	· ,	c. Reference Test Methods, Recordkeeping and Monitoring
(C) The dispatch follows reliability,		situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (d)(2) of \$60.4243 (paragraph (b), above). Except as provided in paragraph (d)(3)(i) of \$60.4243 (paragraph (i), below), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.	Requirements

 BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012 3. Pollutants regulated by the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 subpart JJJJ] Carbon 		
•	drocarbons (HC) and/or Volatile Organic Compound	<u> </u>
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. (D) The power is provided only to the facility itself or to support the local transmission and distribution system. (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [40 CFR §§ 60.4243(d) and 60.4248, s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)] (6) If the emergency stationary SI internal combustion engine (generator) that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable	

to non-emergency engines, the owner or

BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012		
·	ormance (NSPS) for Stationary Spark Ignition Inter- trocarbons (HC) and/or Volatile Organic Compound	rnal Combustion Engines [40 CFR 60 subpart JJJJ] ⁻ Carbon ds (VOC) –
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	operator must install a non-resettable hour meter. [40 CFR § 60.4237(b), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(7) If you are an owner or operator of an emergency stationary SI internal combustion engine (generator) that is less than 130 HP, was built on or after July 1, 2008, does not meet the standards applicable to non-	
	emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine. [40 CFR § 60.4237(c), s. 285.65(13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (NSPS)]	
	(8) The permittee shall track all hours of operation for each engine (generator). The permittee must identify how many hours are spent for emergency operation, including what classified the hours as emergency operation (purpose of use), and how many hours are spent for non-emergency operation, including what classified the hours as non-emergency operation (purpose of use). [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	
	(9) At the end of each month, the permittee shall determine the following for each engine (generator):(a) The total hours of non-emergency.	
	(a) The total hours of non-emergency	

BI. Process P99I, Stack S99I – Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January
1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and
Drumlin 150 kW (201 HP), mfg. 2012

Monoxide (CO), Nitrogen Oxides (NO _x), Hydrocarbons (HC) and/or Volatile Organic Compounds (VOC) –		
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
	operation (excluding maintenance and readiness testing) for the just completed month; (b) The total hours of non-emergency operation (excluding maintenance and readiness testing) year-to-date for the just completed calendar month; (c) The total hours of non-emergency operation (including maintenance and readiness testing) for the just completed calendar month; and (d) The total hours of non-emergency operation (including maintenance and readiness testing) year-to-date for the just completed calendar month. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	

- BI. Process P99I, Stack S99I Four (4) Campus Natural Gas-Fired Emergency Generators (Equipped with engines manufactured on or after January 1, 2009 and rated ≥ 130 HP): Fischer 100 kW (134 HP), mfg. 2011; Fricker 125 kw (168 HP), mfg. 2015; Wellers 100 kW (134 HP), mfg. 2012; and Drumlin 150 kW (201 HP), mfg. 2012
- 4. Pollutants regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63 subpart ZZZZ] Federal Hazardous Air Pollutants (Federal HAP)

a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) An affected source that is a new or reconstructed stationary RICE located at an area source or a new or reconstructed emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements in 40 CFR part 63, subpart ZZZZ by meeting the requirements of 40 CFR part 60, subpart JJJJ for spark ignition engines. No further requirements apply for such engines under 40 CFR part 63, subpart ZZZZ. [40 CFR §§ 63.6585 (a), (b) and (c), 63.6590(2) and (3), 63.6590(c) (1) and (6) and s. 285.65(13), Wis. Stats. (GACT)]	(1) The compliance demonstration requirements for the NSPS in subsection 3.b., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR § 63.6590(c) (1) and (6), s. 285.65 (3) and (13), Wis. Stats., and s. NR 407.09(4)(a)3.b., Wis. Adm. Code (GACT)]	(1) The monitoring and recordkeeping requirements for the NSPS in subsection 3.c., above, shall be used to demonstrate compliance with 40 CFR part 63, subpart ZZZZ (RICE). [40 CFR § 63.6590(c) (1) and (6), s. 285.65(13), Wis. Stats., and ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code (GACT)]

ZZ. TEST METHODS FOR THE ENTIRE FACILITY

1. Reference Test Methods

a. Methods

- (1) NR 439.06 Methods and Procedures for Demonstrating Compliance with Emission Limitations.
 - (a) <u>Test Method for Particulate Matter Emissions</u>. When emissions testing for nonfugitive particulate matter is required to demonstrate compliance, the permittee shall use US EPA Method 5 or Method 17, including condensable back-half emissions (US EPA Method 202), or an alternate approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(1), Wis. Adm. Code]
 - (b) <u>Test Method for PM₁₀ Particulate Matter Emissions</u>. When emissions testing for nonfugitive PM₁₀ particulate matter is required to demonstrate compliance, the permittee shall use US EPA Method 201 or Method 201A, including condensable back-half emissions (US EPA Method 202), or an alternate approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(1m), Wis. Adm. Code]
 - (c) <u>Test Method for PM_{2.5} Particulate Matter Emissions</u>. When emissions testing for nonfugitive PM_{2.5} particulate matter is required to demonstrate compliance, the permittee shall use US EPA Method 201 or Method 201A, including condensable back-half emissions (US EPA Method 202), or an alternate approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(8), Wis. Adm. Code]
 - (d) <u>Test Method for Visible Emissions</u>. When emissions testing for visible emissions is required to demonstrate compliance, the permittee shall use US EPA Method 9 or an alternate method approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(9)(a)1., Wis. Adm. Code]
 - (e) <u>Test Method for Carbon Monoxide Emissions</u>. When emissions testing for carbon monoxide is required to demonstrate compliance, the permittee shall use US EPA Method 10, 10A, or 10B in appendix A-4 to 40 CFR part 60 or ASTM D6522-00 (Reapproved 2005) or an alternate method approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(4)(a), Wis. Adm. Code, s. 285.65(13), Wis. Stats., and 40 CFR § 63.11212, Table 4 (GACT)]
 - (f) <u>Test Method for Nitrogen Oxides Emissions</u>. When emissions testing for nitrogen oxides is required to demonstrate compliance, the permittee shall use US EPA Method 7 or an alternate method approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(6)(a), Wis. Adm. Code]
 - (g) <u>Test Method for Sulfur Dioxide Emissions</u>: When emissions testing for sulfur dioxide is required to demonstrate compliance, the permittee shall use U.S. EPA Method 6, 6A, 6B, or 6C or Method 8 or an alternative method approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(2)(a), Wis. Adm. Code]
 - (h) <u>Test Method for Volatile Organic Compounds Emissions</u>: When emissions testing of volatile organic compounds is required to demonstrate compliance, the permittee shall use U.S. EPA Method 18 or Method 25 or an alternative method approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(3)(a), Wis. Adm. Code]
 - (i) <u>Test Method for Other Air Contaminants Emissions</u>: When emissions testing for other air contaminants or pollutants, including hazardous air pollutants, is required to demonstrate compliance, the permittee shall use a method approved in writing by the Department. [ss. NR 407.09(4)(a)1. and NR 439.06(8), Wis, Adm. Code]

ZZ. TEST METHODS FOR THE ENTIRE FACILITY

- 1. Reference Test Methods
- a. Methods
- (2) NR 439.08(2) Methods and Procedures for Periodic fuel Sampling and Analysis of Liquid Fossil Fuel.
 - (a) <u>Liquid fossil fuel sampling</u>. Liquid fossil fuel sampling shall be performed according to ASTM D4057–95, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, or ASTM D4177–95, Standard Practice for Automatic Sampling of Petroleum and Petroleum Products. [ss. NR 407.09(4)(a)1. and NR 439.08(2)(a), Wis. Adm. Code]
 - (b) <u>Sulfur content in liquid fossil fuel</u>. The sulfur content of a liquid fossil fuel sample shall be determined according to ASTM D129–00, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), ASTM D1552–03, Standard Test Method for Sulfur in Petroleum Products (High–Temperature Method), or ASTM D4294–03, Standard Test Method for Sulfur in Petroleum Products by Energy–Dispersive X–ray Fluorescence Spectroscopy. [ss. NR 407.09(4)(a)1. and NR 439.08(2)(b), Wis. Adm. Code]
 - (c) <u>Heat content in liquid fossil fuel</u>. The heat content of a liquid fossil fuel sample shall be determined according to ASTM D240–02, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by a Bomb Calorimeter. [ss. NR 407.09(4)(a)1. and NR 439.08(2)(c), Wis. Adm. Code]

ZZZ. General Conditions Applicable to the Entire Facility. 1. State Hazardous Air Pollutants (State HAPs). c. Reference Test Methods, Recordkeeping and Monitoring **b.** Compliance Demonstration **a.** Limitations Requirements (1) The permittee shall keep or have available upon request (1) No owner or operator of a source may (1) When the permittee elects to significantly change the operation of the facility (e.g., raw any hazardous air pollutant (State HAP) determination cause, allow or permit emissions of a material or product change or production made due to a significant change in the facility's hazardous air contaminant listed in Tacapacity increase or fuel change) 46, the perble A of s. NR 445.07. Wis. Adm. operations. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), mittee shall determine, either analytically or Wis. Adm. Code]* Code, in such quantity or through the use of technical calculations, the concentration or for such duration as to facility's new or increased potential emissions (2) The permittee shall report to the Department when the cause an ambient air concentration of of any state hazardous air pollutant (State HAP) potential to emit emissions for any new hazardous air the contaminant off the source emitted, assuming maximum operation pollutant or the potential to emit emission increase for property that exceeds the concentration in column (g) of Table A for the conditions. [s. NR 407.09(4)(a)3.b., Wis. Adm. any existing hazardous air pollutant exceeds a published contaminant. [s. NR 445.07(1)(a), threshold value in Table A of s. NR 445.07, Wis. Adm. Code]* Wis. Adm. Code]*45 Code. The report shall include any actions needed and (2) The permittee shall determine if the facility's taken to protect the ambient air quality standard for that new or increased potential emission rate of any pollutant. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), State HAP exceeds the applicable published de Wis. Adm. Code]* minimus value in Table A of s. NR 445.07, Wis. Adm. Code, or are exempt under s. NR 445.07(5), Wis. Adm. Code. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]* (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 or the emission is exempt under s. NR

445.07(5), Wis. Adm. Code. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]*

⁴⁵ Pursuant to s. NR 445.07(5) (a), Wis. Adm. Code, exempt emissions under ch. NR 445, Wis. Adm. Code, include the emissions from the combustion of group 1 virgin fossil fuels (e.g., natural gas, and distillate fuel oil).

⁴⁶ A change in the supplier of a specific fuel type is not a significant change.

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ZZZ . General Conditions Applicable to the Entire Facility.		
2. Synthetic Minor (Less than SM80) Conditions	s	
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) The permittee shall limit the individual emissions of the following pollutants to no more than 13,166 pounds per month (79 tons per year), averaged over any 12 consecutive month period: (a) Carbon Monoxide, (b) Nitrogen Oxides, (c) Particulate Matter (including PM ₁₀), (d) Sulfur Dioxide, and (d) Volatile Organic Compounds. [s. 285.65(7), Wis. Stats. (Avoid SM80 Status)] (2) The facility's emission of each Federal hazardous air pollutant (Federal HAP) emitted shall not exceed 1,166 lb/month (7.0 TPY), averaged over the twelve most recent consecutive calendar months. [s. 285.65(7), Wis. Stats. (Avoid MACT and SM80 Status)] (3) The sum of the facility's emission of all Federal hazardous air pollutants (Federal HAP) emitted shall not exceed 3,166 lb/month (19 TPY), averaged over the twelve most recent consecutive calendar months. [s. 285.65(7), Wis. Stats. (Avoid MACT and SM80 Status)]	 (1) The permittee shall calculate the monthly emissions of carbon monoxide, particulate matter (including PM₁₀), nitrogen oxide, sulfur dioxide, each Federal HAP, and all Federal HAPs combined using the following information: (a) Emission factors using any of the following methods as approved by the Department: (i) AP-42, (ii) FIRE, (iii) Emission factors derived from the most recent stack test performed for the boilers, or (iv) Another source approved by the Department, if stack testing data is not available. (b) Fuel usage, (c) Heat content of fuel, (d) Mass balance, (e) Control device efficiency or (d) Any other information necessary to determine the emissions as approved by the Department. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (2) If emissions are determined based on a stack test derived emission factor under I.ZZZ.2.b.(1)(a)(iii) the following conditions shall be met: 	 (1) The permittee shall keep the following records: (a) A description of the method(s) used to calculate emissions including mathematical equations, the definitions of all variables and constants, and their origin. (b) The numerical value or each emission factor, or constant used. (c) The monthly fuel usage. (d) The monthly value of any other variable used in the calculation (such as heat content, sulfur content, etc.) (e) The total monthly emissions of carbon monoxide, particulate matter (including PM₁₀), nitrogen oxide, sulfur dioxide, each Federal HAP, and all Federal HAPs combined emitted from the entire facility in units of tons per month using the Department approved methods described in (a) above. (f) The average monthly emissions of carbon monoxide, particulate matter (including PM₁₀), nitrogen oxide, sulfur dioxide, volatile organic compounds, each Federal HAP, and all Federal HAPs combined emitted from the entire facility averaged over a 12-month rolling period in units of tons per month as determined in I.ZZZ.2.b.(3). [ss. NR 439.04 and NR 407.09(4)(a)1., Wis. Adm. Code]

(a) When a stack test indicates a higher

ZZZ. General Conditions Applicable to the Entire Facility.2. Synthetic Minor (Less than SM80) Conditions				
a. Limitations	b. Compliance Demonstration	c. Reference Test Methods, Recordkeeping and Monitoring Requirements		
	emission factor than currently in use, this emission factor must be used to calculate emissions from the date the stack test was conducted forward. (b) When a stack test indicates a lower emission factor and the permittee submits a written request to the Department to use the lower emission factor, the use of this lower emission factor may commence 45 days after Department's receipt of the applicant's written request only if the Department does not object, in writing, to the use of the new emission factor. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] (3) The permittee shall sum the monthly emissions of carbon monoxide, particulate matter (including PM ₁₀), nitrogen oxide, sulfur dioxide, volatile organic compounds, each Federal HAP, and all Federal HAPs combined determined in I.ZZZ.1.a.(1) over the previous 12 months from the entire facility and divide by 12 to determine the 12-month rolling average in tons per calendar month. These calculations shall be performed within 21 calendar days following the end of each calendar month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]			

ZZZ . General Conditions Applicable to the Entire Facility.	
3. Malfunction Prevention and Abatement Plan	
a. Limitations/Conditions	b. Compliance Demonstration
(1) A malfunction prevention and abatement plan shall be prepared and followed	(1) The malfunction prevention and abatement plan shall be developed to pre-

ZZZ . General Conditions Applicable to the Entire Facility.		
3. Malfunction Prevention and Abatement Plan		
a. Limitations/Conditions	b. Compliance Demonstration	
for the plant. [s. NR 439.11, Wis. Adm. Code]	vent, detect and correct malfunctions or equipment failures which may cause any applicable emissions limitation to be violated or which may cause air	
(2) All air pollution control equipment shall be operated and maintained in conformance with good engineering practices (i.e. operated and maintained	pollution. [s. NR 439.11(1), Wis. Adm. Code]	
according to manufacturer's specifications and directions) to minimize the possibility for the exceedance of any emission limitations. [s. NR 439.11(4), Wis. Adm. Code]	(2) This malfunction prevention and abatement plan shall include installation, maintenance and routine calibration procedures for the process monitoring and control equipment instrumentation. This plan shall require an instrumentation calibration at the frequency specified by the manufacturer, yearly or at a frequency based on good engineering practice as established by operational history, whichever is more frequent. Inspection and calibration shall also be conducted whenever instrumentation anomalies are noted. [ss. NR 407.09(1)(c)1.c., NR 439.055(4) and NR 439.11, Wis. Adm. Code] (3) The malfunction prevention and abatement plan shall require a copy of the operation and maintenance manual for the control equipment to be maintained on site. The plan shall contain all of the elements in s. NR 439.11(1)(a) - (h), Wis. Adm. Code. [s. NR 439.11, Wis. Adm. Code]	

ZZZ . General Conditions Applicable to the Entire Facility.		
Stack Testing Requirements		
a. Limitations/Condition	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). [ss. NR 439.07 and 439.075(4), 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]	
(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]		
(3) The Department shall be informed at least 20 working days prior to any stack testing, so a Department representative can witness the testing. At the time of notification, a compliance emission test plan shall also be submitted to the Department for approval. When approved in writing, an equivalent test method may be substituted for the reference test method. The notification and test plan shall be submitted to the Wisconsin Department of Natural Resources, South Central Region Air Program, Madison Service Center. [s. NR 439.07(2), Wis. Adm. Code]		

ZZZ . General Conditions Applicable to the Entire Facility.		
5. Compliance Reports/Records		
a. Limitations/Conditions	b. Compliance Demonstration	
(1) The permittee shall submit periodic monitoring reports. [s. NR 407.09(1)(c)3., Wis. Adm. Code]	(1) The permittee shall submit a monitoring report which contains the results of monitoring or a summary of monitoring results required by this permit to the South Central Region Air Program, Madison Service Center.	
 (2) The permittee shall submit periodic certification of compliance. [s. NR 407.09(4)(a)3., Wis. Adm. Code] (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. [ss. NR 439.04 and NR 439.05, Wis. Adm. Code] 	 (a) The time periods to be addressed by the report are the period from January 1 to December 31. (b) The report shall be submitted to the Department by March 1 after the reporting period. (c) All deviations from and violations of applicable requirements shall be clearly identified in the report. 	
	 (d) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. (e) The content of the submittal is described in item D. of Part II of the operation permit and section NR 439.03(1)(b) Wisconsin Administrative Code. 	
	[ss. NR 407.09(1)(c)3. and NR 439.03(1)(b), Wis. Adm. Code] (2) The permittee shall submit an annual certification of compliance with the requirements of this permit to the Wisconsin Department of Natural Resources South Central Region Air Program, Madison Service Center.	
	 (a) The time period to be addressed by the report is January 1 to December 31 of the preceding year. (b) The report shall be submitted to the Wisconsin Department of Natural by March 1 after the reporting period. (c) The information included in the report shall comply with the requirements of Part II, Section N of this permit. (d) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. 	
	[ss. NR 407.09(4)(a)3. and NR 439.03(1)(c), Wis. Adm. Code]	

ZZZ. General Conditions Applicable to the Entire Facility.	
Construction Permit 16-TAZ-029 Transitional Language	
a. Limitations/Conditions	b. Compliance Demonstration
(1) Modified Emission Unit(s) (B22 and S11). The permittee shall operate under the conditions specified in the construction permit upon the date the permit is issued. [s. 285.65(1) Wis. Stats. (Permit 16-TAZ-029)]	(1) Compliance Reports/Records. The permittee shall submit periodic monitoring reports and certification of compliance as required by conditions I.ZZZ.4.a.(1) and (2) for any modified emission units and under the changes approved in the construction permit. [s. NR 439.04(1)(d), Wis. Adm. Code (Permit 16-TAZ-029)]
	(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 16-TAZ-029. [s. NR 407.05(9), Wis. Adm. Code (Permit 16-TAZ-029)]