

**Iowa Department of Natural Resources  
Title V Operating Permit**

**Name of Permitted Facility: John Deere Product Engineering  
Center**

**Facility Location: 6725 Cedar Heights Drive, Waterloo, IA 50704**

**Air Quality Operating Permit Number: 05-TV-004R1**

**Expiration Date: March 7, 2016**

**Permit Renewal Application Deadline: September 7, 2015**

**EIQ Number: 92-5615**

**Facility File Number: 07-01-087**

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**Responsible Official**

**Name: Mr. Wayne Southall**

**Title: Manager Engineering Operation**

**Mailing Address: 6725 Cedar Heights Drive, Waterloo, IA 50704**

**Phone #: (319) 292-4025**

**Permit Contact Person for the Facility**

**Name: Allison Green**

**Title: Plant Environmental Engineer**

**Mailing Address: P.O. Box 8000, Waterloo, IA 50704**

**Phone #: (319) 292-4026**

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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit. Two Title V Permits are being issued for the John Deere Product Engineering Center and the John Deere Engine Works (which are considered one stationary source). This permit is for the John Deere Product Engineering Center. The Title V permit renewal for the John Deere Engine Works was issued on December 10, 2010 (Permit No. 04-TV-018R1).

**For the Director of the Department of Natural Resources**

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Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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## Abbreviations

acfm.....	actual cubic feet per minute
BACT.....	Best Available Control Technology
CE.....	control equipment
CEM.....	continuous emission monitor
CFR.....	Code of Federal Regulation
°F.....	degrees Fahrenheit
EP.....	emission point
EU.....	emission unit
EIQ.....	emissions inventory questionnaire
ft <sup>3</sup> /hr.....	cubic foot per hour
gal/hr.....	gallons per hour
gr./dscf.....	grains per dry standard cubic foot
hp.....	horsepower
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
MMBTU/hr.....	million British Thermal Unit per hour
MMcf/hr.....	million cubic feet per hour
MVAC.....	motor vehicle air conditioner
NAICS.....	North American Industry Classification System
NSPS.....	new source performance standard
ppmv.....	parts per million by volume
lbs./gal.....	pounds per gallon
lb./hr.....	pounds per hour
lb./MMBtu.....	pounds per million British thermal units
PSD.....	Prevention of Significant Deterioration
SCC.....	Source Classification Codes
scfm.....	standard cubic feet per minute
SIC.....	Standard Industrial Classification
tpy.....	tons per year
ton/yr.....	tons per year
USEPA.....	United States Environmental Protection Agency

### **Pollutants**

PM.....	particulate matter
PM <sub>10</sub> .....	particulate matter ten microns or less in diameter
SO <sub>2</sub> .....	sulfur dioxide
NO <sub>x</sub> .....	nitrogen oxides
VOC.....	volatile organic compound
CO.....	carbon monoxide
HAP.....	hazardous air pollutant

# I. Facility Description and Equipment List

Facility Name: John Deere Product Engineering Center

Permit Number: 05-TV-004R1

Facility Description: Farm Machinery and Equipment (SIC 3523)

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## Equipment List

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### A. PSD Engine Test Cells

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
1AX01	1AX01	Vehicle Test Cell	05-A-806-P1
1AX02	1AX02	Vehicle Test Cell	04-A-720-P2
2A1	2A1	Diesel Engine Test Cell	04-A-721-P1
2A2	2A2	Diesel Engine Test Cell	04-A-722-P1
2AN-01	2AN-01	Diesel Engine Test Cell	04-A-725-P2
2AN-03	2AN-03	Diesel Engine Test Cell	04-A-728-P2
2AN-08	2AN-08	Diesel Engine Test Cell	04-A-729-P1
2AN-10A	2AN-10	Diesel Engine Test Cell	04-A-731-P2
2AN-10B			04-A-732-P1
2AN-10C			04-A-733-P2
2AN-11	2AN-11	Diesel Engine Test Cell	04-A-734-P1
2AN-13A	2AN-13	Diesel Engine Test Cell	04-A-735-P2
2AN-13B			04-A-736-P1
2B-01	2B-01	Diesel Engine Test Cell	04-A-738-P1
2CX-01	2CX-01	Axle Test Cell	04-A-742-P2
2CX-02	2CX-02	Axle Test Cell	04-A-739-P2
2CX-04	2CX-04	Axle Test Cell	04-A-740-P2
2CX-05	2CX-05	Axle Test Cell	04-A-741-P3
2CX-03	2CX-03	Axle Test Cell	04-A-744-P2
2EW-01	2EW-01	Diesel Engine Test Cell	04-A-746-P1
2EW-02	2EW-02	Diesel Engine Test Cell	04-A-747-P1
2EW-03	2EW-03	Diesel Engine Test Cell	04-A-748-P1
2EW-04	2EW-04	Diesel Engine Test Cell	04-A-749-P1
2EW-05	2EW-05	Diesel Engine Test Cell	04-A-750-P1
2EW-06	2EW-06	Diesel Engine Test Cell	04-A-751-P1
2EW-07	2EW-07	Diesel Engine Test Cell	04-A-752-P1

**A. PSD Engine Test Cells (cont.)**

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
2EW-08	2EW-08	Diesel Engine Test Cell	04-A-753-P1
2EW-10	2EW-10	Diesel Engine Test Cell	04-A-754-P1
2EW-11	2EW-11	Diesel Engine Test Cell	04-A-755-P1
2EW-12	2EW-12	Diesel Engine Test Cell	04-A-756-P1
2EW-13	2EW-13	Diesel Engine Test Cell	04-A-757-P1
2EW-14	2EW-14	Diesel Engine Test Cell	04-A-758-P1
2EW-15	2EW-15	Diesel Engine Test Cell	04-A-759-P1
2EW-16	2EW-16	Diesel Engine Test Cell	04-A-760-P1
2NX-01	2NX-01	Vehicle Wind Tunnel Test Cell	04-A-761-P2
2NX-10A	2NX-10	Vehicle Cold Room Test Cell	04-A-764-P2
2NX-10B			04-A-765-P1
2NX-13	2NX-13	Vehicle Test Cell	04-A-766-P2
2NX-15	2NX-15	Gen Set Test Cell	04-A-767-P1
5NB3	5NB3	Transmission Test Cell	04-A-768-P2
5NB4	5NB4	Transmission Test Cell	04-A-769-P1
5NB6	5NB6	Transmission Test Cell	04-A-770-P1
5W1	5W1	Transmission Test Cell	04-A-771-P1
5XS	5XS	Vehicle Test Cell	04-A-772-P2
5XN	5XN	Vehicle Test Cell	04-A-773-P2
1AX02(N)	1AX02(N)	Diesel Engine Test Cell	04-A-774-P2
5XC	5XC	Diesel Engine Test Cell	04-A-793-P2

**B. Non PSD Engine Test Cells**

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
2AX-01	2AX-01	Diesel Engine Test Cell	04-A-775-S1
2AX-02	2AX-02	Diesel Engine Test Cell	04-A-776-S1
2AX-03	2AX-03	Diesel Engine Test Cell	04-A-777-S1
2AX-04	2AX-04	Diesel Engine Test Cell	04-A-778-S1
2AX-05	2AX-05	Diesel Engine Test Cell	04-A-779-S1
2AX-06	2AX-06	Diesel Engine Test Cell	04-A-780-S1
2AX-07	2AX-07	Diesel Engine Test Cell	04-A-781-S1
2AX-08	2AX-08	Diesel Engine Test Cell	04-A-782-S1
2BX	2BX	Vehicle Sound Room Test Cell	04-A-783-S2
2BX-02	2BX-02	Transmission Test Cell	04-A-784-S2

**B. Non PSD Engine Test Cells (cont)**

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
2BX-04	2BX-04	Transmission Test Cell	04-A-785-S1
2BX-06	2BX-06	Transmission Test Cell	04-A-786-S2
2BX-08	2BX-08	Transmission Test Cell	04-A-787-S2
2EA	2EA	Diesel Engine Test Cell	04-A-788-S1
2EB	2EB	Diesel Engine Test Cell	04-A-789-S1
2EC	2EC	Diesel Engine Test Cell	04-A-790-S1
2ED	2ED	Diesel Engine Test Cell	04-A-791-S1
2EW-09	2EW-09	Diesel Engine Test Cell	04-A-795-S1
2EW-17	2EW-17	Diesel Engine Test Cell	07-A-485
2EW-18	2EW-18	Diesel Engine Test Cell	07-A-486
2EW-19	2EW-19	Diesel Engine Test Cell	08-A-522
2N-05	2N-05	Diesel Engine Test Cell	07-A-487-S1
2W4C	2W4C	Diesel Engine Test Cell	06-A-179
2A-04A	2A-04	Diesel Engine Test Cell	06-A-713
2A-08A	2A-08	Diesel Engine Test Cell	06-A-714
2A-08B	2A-08	Diesel Engine Test Cell	06-A-715
2A-03A	2A-03	Diesel Engine Test Cell	06-A-712
2A-03B	2A-03	Diesel Engine Test Cell	05-A-595-S1
2A-04B	2A-04	Diesel Engine Test Cell	05-A-596-S1
1AD-20	1AD-20	Diesel Engine Test Cell	10-A-358
5X6	5X6	Diesel Engine Test Cell	10-A-359

### C. Unpermitted Engine Test Cells

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
2A-05	2A-05	Diesel Engine Test Cell	N/A
2A-06	2A-06	Diesel Engine Test Cell	N/A
2A-07A	2A-07	Diesel Engine Test Cell	N/A
2A-07B			N/A
2A-09	2A-09	Diesel Engine Test Cell	N/A
2A-10	2A-10	Diesel Engine Test Cell	N/A
2B-02	2B-02	Transmission Test Cell	N/A
2B-03	2B-03	Transmission Test Cell	N/A
2B-04	2B-04	Transmission Test Cell	N/A
2B-05	2B-05	Transmission Test Cell	N/A
2C-02	2C-02	Diesel Engine Test Cell	N/A
2C-03	2C-03	Transmission Test Cell	N/A
2C-04	2C-04	Transmission Test Cell	N/A
2C-05	2C-05	Transmission Test Cell	N/A
2C-06	2C-06	Transmission Test Cell	N/A
2C-08	2C-08	Transmission Test Cell	N/A
2N-02	2N-02	Diesel Engine Test Cell	N/A
2N-03	2N-03	Diesel Engine Test Cell	N/A
2N-04	2N-04	Diesel Engine Test Cell	N/A
2N-07	2N-07	Diesel Engine Test Cell	N/A
2N-08	2N-08	Diesel Engine Test Cell	N/A
2N-10A	2N-10	Diesel Engine Test Cell	N/A
2N-10B			N/A
2N-10C			N/A
2N-10D			N/A

### D. Oil Mist Eliminators

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
2EWME1	2EWME1	Oil Mist Eliminator	97-A-790-S2
2EWME2	2EWME2	Oil Mist Eliminator	97-A-791-S2

**E. Permitted Boilers**

3A	3A	Boiler 15 (Natural Gas)	91-A-171-S2
	3A-FO	Boiler 15 (Fuel Oil)	
3B	3B	Boiler 16 (Natural Gas)	91-A-172-S3
	3B-FO	Boiler 16 (Fuel Oil)	
3C	3C	Boiler 17 (Natural Gas)	94-A-188-S2
	3C-FO	Boiler 17 (Fuel Oil)	

**F. Diesel Tanks**

T1	T1	Diesel Tank 1	99-A-793
T2	T2	Diesel Tank 2	99-A-794
T3	T3	Diesel Tank 3	99-A-795

**G. Diesel Emergency Generators**

2N-01A	2N-01A	Emergency Generator-Crit.	N/A
2N-01B	2N-01B	Emergency Generator-Plant	N/A

**H. Miscellaneous Sources**

2NX6	2NX6	Boiler – Wind Tunnel (natural gas)	N/A
	2NX6-FO	Boiler – Wind Tunnel (Fuel Oil)	
5N	5N	Paint Booth	80-A-008-S2
12	12	Emergency Office Generator	N/A

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**Insignificant Activities Equipment List**

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<b>Insignificant Emission Unit Number</b>	<b>Insignificant Emission Unit Description</b>
2AWB4	Hot Water Heaters (2 units 1.4 MMBtu/hr , Natural Gas)
2AWB5	Hot Water Heaters (2 units 1.4 MMBtu/hr, Natural Gas)
2AWA	Steam Boiler (1.26 MMBtu/hr, Natural Gas) <sup>(1)</sup>
2S-15A	Hot Water Heater ( 0.04 MMBtu/hr, Natural Gas)
2S-15B	Hot Water Heater (0,034 MMBtu/hr, Natural Gas)
5A	Pattern Shop Power Tools
11	Building 11 Furnace (0.175 MMBtu/hr, Natural Gas)
2C	Water Heater (0.075 MMBtu/hr, Natural Gas)
5D3	Machine Shop/Office Water Heater (1.17 MMBtu/hr, Natural Gas)
5NA-2A1	Steam Boiler (2.52 MMBtu/hr, Natural Gas) <sup>(1)</sup>
5NA-2A2	Steam Boiler (2.52 MMBtu/hr, Natural Gas) <sup>(1)</sup>
5NA-2B1	Hot Water Heater (4.2 MMBtu/hr, Natural Gas)
5NA-2B2	Hot Water Heater (4.2 MMBtu/hr, Natural Gas)
5NA-2B3	Hot Water Heater (4.2 MMBtu/hr, Natural Gas)
T4	Biodiesel Fuel Tank (20,000 Gallons, Vapor Pressure 0.05 psi)
D1	Diesel Tank (1000 gallons)
D1EG	Diesel Tank for Emergency Generator (500 Gallons)
D2	Diesel Tank (1000 gallons)
UNL	Fuel Tank (Unleaded Gasoline, 1000 gallons)
AHU	12 Air Heating Units (<10 MMBtu/hr, Natural Gas)
RTU	5 Roof Top Heating Units (<10 MMBtu/hr, Natural Gas)

<sup>(1)</sup> **This unit is of the source type regulated by the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters (567 IAC 23.1(4)"dd", 40 CFR Part 63, Subpart DDDDD), but is not subject to the initial notification or any other requirements of Subparts DDDDD or A of 40 CFR Part 63. On July 30, 2007, the DC Circuit Court vacated 40 CFR Part 63, Subpart DDDDD).**

## II. Plant-Wide Conditions

Facility Name: John Deere Product Engineering Center  
Permit Number: 05-TV-004R1

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

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### Permit Duration

The term of this permit is: Five (5) years  
Commencing on: March 8, 2011  
Ending on: March 7, 2016

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

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### Emission Limits

Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity  
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO<sub>2</sub>): 500 parts per million by volume  
Authority for Requirement: 567 IAC 23.3(3)"e"

#### Particulate Matter:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).  
Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

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### **Plant-Wide Operational Limits & Requirements**

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

#### **Operating Limits:**

1. The sulfur content of No. 1 and No. 2 fuel oil used shall not exceed 0.5% (by weight).

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

2. John Deere PEC (Plant No. 07-01-087) is limited to a plant-wide fuel consumption of 4,750,000 gallons of fuel per rolling 12-month period with maximum sulfur content of 0.05 percent by weight.
3. John Deere PEC (Plant No. 07-01-087) is limited to a plant wide fuel consumption of 250,000 gallons of fuel per rolling 12-month period with maximum sulfur content of 1.2 percent by weight.

**Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. Record on a monthly basis, the amount of fuel with a sulfur content less than 0.05 percent by weight consumed at John Deere PEC (Plant No. 07-01-087) in gallons. Calculate and record rolling 12-month totals.
2. Record on a monthly basis, the amount of fuel with a sulfur content greater than 0.05 percent by weight but less than 1.2 percent by weight consumed at John Deere PEC (Plant No. 07-01-087) in gallons. Calculate and record rolling 12-month totals.

Authority for Requirement: Iowa DNR Construction Permits 07-A-485, 07-A-486, 07-A-487-S1, and 08-A-522.

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**Compliance Plan**

*The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.*

Unless otherwise noted in Section III of this permit, John Deere Product Engineering Center (JDPEC) is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, JDPEC shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

### III. Emission Point-Specific Conditions

Facility Name: John Deere Product Engineering Center

Permit Number: **05-TV-004R1**

#### Emission Point ID Number: See Table PSD Test Cells

#### Associated Equipment

Associated Emission Unit ID Numbers: See Table: PSD Test Cells

Table: PSD Test Cells

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material/ Fuel	Rated Capacity
1AX01	1AX02	Vehicle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
1AX02	1AX02	Vehicle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2A1	2A1	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2A2	2A2	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2AN-01	2AN-01	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2AN-03	2AN-03	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2AN-08	2AN-08	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2AN-10A <sup>(1)</sup>	2AN-10	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2AN-10B <sup>(1)</sup>				
2AN-10C <sup>(1)</sup>				
2AN-11	2AN-11	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2AN-13A <sup>(1)</sup>	2AN-13	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2AN-13B <sup>(1)</sup>				
2B-01	2B-01	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2CX-01	2CX-01	Axle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2CX-02	2CX-02	Axle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2CX-04	2CX-04	Axle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2CX-05	2CX-05	Axle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2CX-03	2CX-03	Axle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-01	2EW-01	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-02	2EW-02	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-03	2EW-03	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-04	2EW-04	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-05	2EW-05	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-06	2EW-06	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-07	2EW-07	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp

Table: PSD Test Cells

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material/Fuel	Rated Capacity
2EW-08	2EW-08	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-10	2EW-10	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-11	2EW-11	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-12	2EW-12	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-13	2EW-13	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-14	2EW-14	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-15	2EW-15	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2EW-16	2EW-16	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2NX-01	2NX-01	Vehicle Wind Tunnel Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2NX-10A <sup>(1)</sup>	2NX-10	Vehicle Cold Room Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2NX-10B <sup>(1)</sup>				
2NX-13	2NX-13	Vehicle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
2NX-15	2NX-15	Gen Set Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
5NB3	5NB3	Transmission Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
5NB4	5NB4	Transmission Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
5NB6	5NB6	Transmission Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
5W1	5W1	Transmission Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
5XS	5XS	Vehicle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
5XN	5XN	Vehicle Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
1AX02(N) <sup>(3)</sup>	1AX02(N)	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp
5XC	5XC	Diesel Engine Test Cell	Diesel <sup>(2)</sup>	24.5 gal/hr, 1,000 hp

<sup>(1)</sup> Only one of the emission points for this unit will be used at a time.

<sup>(2)</sup> The fuel may also include biodiesel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.

<sup>(3)</sup> This unit was not yet constructed at the time of the TV Permit issuance.

## Applicable Requirements

### Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Table: PSD Test Cells-Emission Limits

EP	EU	Opacity	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/MM Btu)	NO <sub>x</sub>		CO (lb/hr)	Iowa DNR Construction Permit # (Authority for Requirement)
						lb/hr	lb/MMBtu		
1AX01	1AX01	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	05-A-806-P1
1AX02	1AX02	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-720-P2
2A1	2A1	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-721-P1
2A2	2A2	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-722-P1
2AN-01	2AN-01	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-725-P2
2AN-03	2AN-03	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-728-P2
2AN-08	2AN-08	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-729-P1
2AN-10A	2AN-10	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-731-P2
2AN-10B		40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-732-P1
2AN-10C		40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-733-P2
2AN-11	2AN-11	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-734-P1
2AN-13A	2AN-13	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-735-P2
2AN-13B		40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-736-P1
2B-01	2B-01	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-738-P1
2CX-01	2CX-01	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-742-P2
2CX-02	2CX-02	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-739-P2
2CX-04	2CX-04	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-740-P2
2CX-05	2CX-05	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-741-P3
2CX-03	2CX-03	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-744-P2
2EW-01	2EW-01	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-746-P1
2EW-02	2EW-02	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-747-P1
2EW-03	2EW-03	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-748-P1
2EW-04	2EW-04	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-749-P1
2EW-05	2EW-05	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-750-P1
2EW-06	2EW-06	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-751-P1
2EW-07	2EW-07	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-752-P1
2EW-08	2EW-08	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-753-P1
2EW-10	2EW-10	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-754-P1
2EW-11	2EW-11	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-755-P1
2EW-12	2EW-12	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-756-P1
2EW-13	2EW-13	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-757-P1
2EW-14	2EW-14	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-758-P1
2EW-15	2EW-15	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-759-P1

Table: PSD Test Cells-Emission Limits

EP	EU	Opacity	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/MM Btu)	NO <sub>x</sub>		CO (lb/hr)	Iowa DNR Construction Permit # (Authority for Requirement)
						lb/hr	lb/MMBtu		
2EW-16	2EW-16	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-760-P1
2NX-01	2NX-01	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-761-P2
2NX-10A	2NX-10	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-764-P2
2NX-10B		40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-765-P1
2NX-13	2NX-13	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-766-P2
2NX-15	2NX-15	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-767-P1
5NB3	5NB3	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-768-P2
5NB4	5NB4	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-769-P1
5NB6	5NB6	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-770-P1
5W1	5W1	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-771-P1
5XS	5XS	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-772-P2
5XN	5XN	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-773-P2
1AX02(N)	1AX02(N)	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-774-P2
5XC	5XC	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	1.52 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-793-P2

<sup>(1)</sup> An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

<sup>(2)</sup> Standard is expressed as the average of 3 runs.

### Additional Authority for Requirements

Pollutant: Opacity

Emission Limits: 40%

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 2.5 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(3)"b"

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limits: 500 ppmv (for gaseous fuels)

Authority for Requirement: 567 IAC 23.3(3)"e"

## **Operational Limits & Requirements**

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

### **Operating Limits:**

1. The units are limited to firing on the following fuels: diesel fuel, biodiesel fuel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.
2. The sulfur (S) content of the fuel used in the PSD test cells (those units with a permit denoted with a "P" i.e. 04-A-XXX-P) shall not exceed 0.05% (by weight) except for an amount listed in 4., below, which shall not exceed a S content of 1.2% (by weight).
3. The total fuel used by the PSD test cells the PSD test cells (those units with a permit denoted with a "P" i.e. 04-A-XXX-P) shall not exceed three (3) million gallons per year.
4. Of the fuel used in the PSD test cells (those units with a permit denoted with a "P" i.e. 04-A-XXX-P), no more than 750,000 gallons per year shall have a S content greater than 0.05% (by weight).<sup>(1)</sup>
5. The total fuel used by the facility (plant number 07-01-087) shall not exceed five (5) million gallons per year with a S content not to exceed 1.2% (by weight).<sup>(1)</sup>

### **Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The type of fuel and its respective sulfur content (in wt%).
2. Determine the annual amount of fuel used by the PSD test cells (those units with a permit denoted with a "P", i.e. 04-A-XXX-P) on a rolling-12-month basis for each month of operation.
3. Determine the annual amount of fuel with a S content greater than 0.05% (by weight) used by the PSD test cells (those units with a permit denoted with a "P", i.e. 04-A-XXX-P) on a rolling-12-month basis for each month of operation.
4. Determine the annual amount of fuel used by the facility (plant number 07-01-087) on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits listed in Table: PSD Test Cells-  
Emission Limits

<sup>(1)</sup> These limits are superseded by the facility-wide limits of 250,000 gallons of fuel with a maximum sulfur content of 1.2% by weight and 4,750,000 gallons of fuel with a maximum sulfur content of 0.05% listed in Iowa DNR Construction Permits 07-A-484, 07-A-486, 07-A-487-S1 and 08-A-522.

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

Table: PSD Test Cells – Emission Point Characteristics

			Stack Characteristics				
EP	EU	Construction Permit #	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Exhaust Temp. (°F)	Exhaust Flowrate (scfm)
1AX01	1AX01	05-A-806-P1	39	Unobstructed Vertical	15	500	5,000
1AX02	1AX02	04-A-720-P2	25	Unobstructed Vertical	30x36	500	5,600
2A1	2A1	04-A-721-P1	33	Unobstructed Vertical	12	500-570	300-850
2A2	2A2	04-A-722-P1	33	Unobstructed Vertical	12	500-570	300-850
2AN-01	2AN-01	04-A-725-P2	33	Unobstructed Vertical	12	500-570	300-850
2AN-03	2AN-03	04-A-728-P2	33	Unobstructed Vertical	12	500-570	300-850
2AN-08	2AN-08	04-A-729-P1	33	Unobstructed Vertical	16	500-570	300-850
2AN-10A	2AN-10	04-A-731-P2	33	Unobstructed Vertical	10	125	550-2,500
2AN-10B		04-A-732-P1	33	Unobstructed Vertical	6	500-570	300-850
2AN-10C		04-A-733-P2	33	Unobstructed Vertical	16	500-570	500-3,000
2AN-11	2AN-11	04-A-734-P1	33	Unobstructed Vertical	14	500-570	300-850
2AN-13A	2AN-13	04-A-735-P2	33	Unobstructed Vertical	16	125	1,000-4,000
2AN-13B		04-A-736-P	33	Unobstructed Vertical	14	500-570	300-850
2B-01	2B-01	04-A-738-P1	33	Unobstructed Vertical	12	500-570	300-850
2CX-01	2CX-01	04-A-742-P2	40	Unobstructed Vertical	12	500-570	300-850
2CX-02	2CX-02	04-A-739-P2	40	Unobstructed Vertical	12	500-570	300-850
2CX-04	2CX-04	04-A-740-P2	40	Unobstructed Vertical	12	500-570	300-850

Table: PSD Test Cells – Emission Point Characteristics

Table: PSD Test Cells – Emission Point Characteristics			Stack Characteristics				
EP	EU	Construction Permit #	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Exhaust Temp. (°F)	Exhaust Flowrate (scfm)
2CX-05	2CX-05	04-A-741-P3	40	Unobstructed Vertical	12	500	3,500
2CX-03	2CX-03	04-A-744-P2	40	Unobstructed Vertical	12	500-570	300-850
2EW-01	2EW-01	04-A-746-P1	38	Unobstructed Vertical	10	500-570	300-850
2EW-02	2EW-02	04-A-747-P1	38	Unobstructed Vertical	10	500-570	300-850
2EW-03	2EW-03	04-A-748-P1	38	Unobstructed Vertical	10	500-570	300-850
2EW-04	2EW-04	04-A-749-P1	38	Unobstructed Vertical	10	500-570	300-850
2EW-05	2EW-05	04-A-750-P1	38	Unobstructed Vertical	10	500-570	300-850
2EW-06	2EW-06	04-A-751-P1	38	Unobstructed Vertical	10	500-570	300-850
2EW-07	2EW-07	04-A-752-P1	38	Unobstructed Vertical	10	500-570	300-850
2EW-08	2EW-08	04-A-753-P1	33	Unobstructed Vertical	10	500-570	300-850
2EW-10	2EW-10	04-A-754-P1	33	Unobstructed Vertical	10	500-570	300-850
2EW-11	2EW-11	04-A-755-P1	33	Unobstructed Vertical	10	500-570	300-850
2EW-12	2EW-12	04-A-756-P1	33	Unobstructed Vertical	10	500-570	300-850
2EW-13	2EW-13	04-A-757-P1	33	Unobstructed Vertical	10	500-570	300-850
2EW-14	2EW-14	04-A-758-P1	33	Unobstructed Vertical	10	500-570	300-850
2EW-15	2EW-15	04-A-759-P1	33	Unobstructed Vertical	10	500-570	300-850
2EW-16	2EW-16	04-A-760-P1	33	Unobstructed Vertical	10	500-570	300-850
2NX-01	2NX-01	04-A-761-P2	42	Unobstructed Vertical	12x13	500	2,500-5,000
2NX-10A	2NX-10	04-A-764-P2	44	Unobstructed Vertical	10	500	3,000

Table: PSD Test Cells – Emission Point Characteristics

Table: PSD Test Cells – Emission Point Characteristics			Stack Characteristics				
EP	EU	Construction Permit #	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Exhaust Temp. (°F)	Exhaust Flowrate (scfm)
2NX-10B		04-A-765-P1	44	Unobstructed Vertical	10	500-570	300-850
2NX-13	2NX-13	04-A-766-P2	34	Unobstructed Vertical	16	500	4,800
2NX-15	2NX-15	04-A-767-P1	33	Unobstructed Vertical	6	500-570	300-850
5NB3	5NB3	04-A-768-P2	41	Unobstructed Vertical	12	500-570	300-850
5NB4	5NB4	04-A-769-P1	41	Unobstructed Vertical	12	500-570	300-850
5NB6	5NB6	04-A-770-P1	41	Unobstructed Vertical	12	500-570	300-850
5W1	5W1	04-A-771-P1	41	Unobstructed Vertical	8	500-570	300-850
5XS	5XS	04-A-772-P2	44	Unobstructed Vertical	14	500	3,500
5XN	5XN	04-A-773-P2	44	Unobstructed Vertical	14	500	3,500
1AX02(N)	1AX02(N)	04-A-774-P2	39	Unobstructed Vertical	16	500	5,000
5XC	5XC	04-A-793-P2	44	Unobstructed Vertical	14	500	3,500

Authority for Requirement: Iowa DNR Construction Permits Referenced in Table PSD Cells – Emission Point Characteristics

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: See Table: Non PSD Test Cells**

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Non PSD Test Cells

Table: Non PSD Test Cells

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity
2AX-01	2AX-01	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2AX-02	2AX-02	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2AX-03	2AX-03	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2AX-04	2AX-04	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2AX-05	2AX-05	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2AX-06	2AX-06	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2AX-07	2AX-07	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2AX-08	2AX-08	Vehicle Sound Room Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2BX	2BX	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2BX-02	2BX-02	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2BX-04	2BX-04	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2BX-06	2BX-06	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2BX-08	2BX-08	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2EA	2EA	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2EB	2EB	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2EC	2EC	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2ED	2ED	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2EW-09	2EW-09	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2EW-17	2EW-17	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2EW-18	2EW-18	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2EW-19	2EW-19	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	1,000 hp
2N-05	2N-05	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2W4C	2W4C	Gen-set Test Cell	Diesel <sup>(1)</sup>	600 hp
2A-04A	2A-04A	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	750 hp
2A-08A	2A-08	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	750 hp
2A-08B				
2A-03A	2A-03	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	750 hp
2A-03B				
2A-04B	2A-04B	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	750 hp
1AD-20 <sup>(2)</sup>	1AD-20	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
5X6	5X6	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp

<sup>(1)</sup> The fuel may also include biodiesel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.

<sup>(2)</sup> This unit was not yet constructed at the time of the TV Permit issuance.

## Applicable Requirements

### Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Table: Non PSD Cells – Emission Limits

EP	EU	Opacity	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/MMBtu)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	Iowa DNR Construction Permit # (Authority for Requirement)
2AX-01	2AX-01	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-775-S1
2AX-02	2AX-02	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-776-S1
2AX-03	2AX-03	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-777-S1
2AX-04	2AX-04	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-778-S1
2AX-05	2AX-05	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-779-S1
2AX-06	2AX-06	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-780-S1
2AX-07	2AX-07	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-781-S1
2AX-08	2AX-08	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-782-S1
2BX	2BX	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-783-S2
2BX-02	2BX-02	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-784-S2
2BX-04	2BX-04	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-785-S1
2BX-06	2BX-06	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-786-S2
2BX-08	2BX-08	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-787-S2
2EA	2EA	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-788-S1
2EB	2EB	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-789-S1
2EC	2EC	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-790-S1
2ED	2ED	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-791-S1
2EW-09	2EW-09	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	04-A-795-S1
2EW-17	2EW-17	40% <sup>(1)</sup>	0.11 <sup>(2)</sup>	0.11 <sup>(2)</sup>	2.5 <sup>(2)</sup>	1.20 <sup>(2)</sup>	0.28 <sup>(2)</sup>	07-A-485
2EW-18	2EW-18	40% <sup>(1)</sup>	0.11 <sup>(2)</sup>	0.11 <sup>(2)</sup>	2.5 <sup>(2)</sup>	1.20 <sup>(2)</sup>	0.28 <sup>(2)</sup>	07-A-486
2EW-19	2EW-19	40% <sup>(1)</sup>	0.11 <sup>(2)</sup>	0.11 <sup>(2)</sup>	2.5 <sup>(2)</sup>	1.20 <sup>(2)</sup>	0.28 <sup>(2)</sup>	08-A-522
2N-05	2N-05	40% <sup>(1)</sup>	0.11 <sup>(2)</sup>	0.11 <sup>(2)</sup>	2.5 <sup>(2)</sup>	1.20 <sup>(2)</sup>	0.28 <sup>(2)</sup>	07-A-487-S1
2W4C	2W4C	40% <sup>(1)</sup>	0.19 <sup>(2)</sup>	0.19 <sup>(2)</sup>	2.5 <sup>(2)</sup>	6.5 <sup>(2)</sup>	N/A	06-A-179
2A-04A	2A-04A	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	06-A-713
2A-08A	2A-08	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	06-A-714
2A-08B		40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	06-A-715
2A-03A	2A-03	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	06-A-712
2A-03B		40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	05-A-595-S1
2A-04B	2A-04B	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	0.23 <sup>(2)</sup>	05-A-596-S1
1AD-20	1AD-20	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	N/A	10-A-358
5X6	5X6	40% <sup>(1)</sup>	0.082 <sup>(2)</sup>	0.082 <sup>(2)</sup>	2.5	0.86 <sup>(2)</sup>	N/A	10-A-359

<sup>(1)</sup> An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with

the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

<sup>(2)</sup> Standard is expressed as the average of 3 runs.

### **Additional Authority for Requirements**

Pollutant: Opacity

Emission Limits: 40%

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permits 07-A-485, 07-A-486, 08-A-522,  
and 07-A-487-S1  
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 2.5 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(3)"b"

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limits: 500 ppmv (for gaseous fuels)

Authority for Requirement: 567 IAC 23.3(3)"e"

### **Operational Limits & Requirements**

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

#### **Operating Limits:**

1. The units are limited to firing on the following fuels: diesel fuel, biodiesel fuel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.
2. John Deere PEC (Plant No. 07-01-087) is limited to a plant-wide fuel consumption of 4,750,000 gallons of fuel per rolling 12-month period with maximum sulfur content of 0.05 percent by weight.
3. John Deere PEC (Plant No. 07-01-087) is limited to a plant-wide fuel consumption of 250,000 gallons of fuel per rolling 12-month period with maximum sulfur content of 1.2 percent by weight.

#### **Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. Record, on a monthly basis, the amount of fuel with a sulfur content of 0.05 percent by weight consumed at John Deere PEC (Plant No. 07-01-087) in gallons. Calculate and record rolling 12-month totals.

2. Record, on a monthly basis, the amount of fuel with a sulfur content of 1.2 percent by weight consumed at John Deere PEC (Plant No. 07-01-087) in gallons. Calculate and record rolling 12-month totals.
3. Maintain a record of the type of fuel used in these units and the corresponding sulfur content as a percent by weight.

Authority for Requirement: Iowa DNR Construction Permits 07-A-485, 07-A-486, 07-A-487-S1 and 08-A-522.

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

Table Non PSD Test Cells – Emission Point Characteristics			Stack Characteristics				
EP	EU	Construction Permit #	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Exhaust Temp. (°F)	Exhaust Flowrate (scfm)
2AX-01	2AX-01	04-A-775-S1	33	Unobstructed Vertical	10	500-570	300-850
2AX-02	2AX-02	04-A-776-S1	33	Unobstructed Vertical	12	500-570	300-850
2AX-03	2AX-03	04-A-777-S1	33	Unobstructed Vertical	14	500-570	300-850
2AX-04	2AX-04	04-A-778-S1	33	Unobstructed Vertical	8	500-570	300-850
2AX-05	2AX-05	04-A-779-S1	33	Unobstructed Vertical	14	500-570	300-850
2AX-06	2AX-06	04-A-780-S1	33	Unobstructed Vertical	14	500-570	300-850
2AX-07	2AX-07	04-A-781-S1	33	Unobstructed Vertical	14	500-570	300-850
2AX-08	2AX-08	04-A-782-S1	33	Unobstructed Vertical	14	500-570	300-850
2BX	2BX	04-A-783-S2	37	Horizontal	12	500	2,000
2BX-02	2BX-02	04-A-784-S2	33	Unobstructed Vertical	8	500-570	300-850
2BX-04	2BX-04	04-A-785-S1	33	Unobstructed Vertical	16	500-570	300-850
2BX-06	2BX-06	04-A-786-S2	33	Unobstructed Vertical	12	500-570	300-850
2BX-08	2BX-08	04-A-787-S2	33	Unobstructed Vertical	12	500-570	300-850
2EA	2EA	04-A-788-S1	33	Unobstructed Vertical	10	500-570	300-850
2EB	2EB	04-A-789-S1	33	Unobstructed Vertical	10	500-570	300-850
2EC	2EC	04-A-790-S1	33	Unobstructed Vertical	10	500-570	300-850
2ED	2ED	04-A-791-S1	33	Unobstructed Vertical	10	500-570	300-850
2EW-09	2EW-09	04-A-795-S1	33	Unobstructed Vertical	10	500-570	300-850
2EW-17	2EW-17	07-A-485	33	Unobstructed Vertical	10	500-570	300-850
2EW-18	2EW-18	07-A-486	33	Unobstructed Vertical	10	500-570	300-850
2EW-19	2EW-19	08-A-522	33	Unobstructed Vertical	10	500-570	300-850
2N-05	2N-05	07-A-487-S1	33	Unobstructed Vertical	10	500-570	300-850
2W4C	2W4C	06-A-179	33	Unobstructed Vertical	8	500-570	300-850

Table Non PSD Test Cells –  
Emission Point Characteristics

Table Non PSD Test Cells – Emission Point Characteristics			Stack Characteristics				
EP	EU	Construction Permit #	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Exhaust Temp. (°F)	Exhaust Flowrate (scfm)
2A-04A	2A-04A	06-A-713	41	Unobstructed Vertical	18	400	850-4000
2A-08A	2A-08	06-A-714	41	Unobstructed Vertical	20	200	1500-8000
2A-08B		06-A-715	41	Unobstructed Vertical	12	500-570	300-850
2A-03A	2A-03	06-A-712	41	Unobstructed Vertical	20	400	1500-7000
2A-03B		05-A-595-S1	38	Unobstructed Vertical	12	500-570	300-850
2A-04B	2A-04B	05-A-596-S1	38	Unobstructed Vertical	12	500-570	300-850
1AD-20	1AD-20	10-A-358	34	Unobstructed Vertical	16	500	4,500
5X6	5X6	10-A-359	42	Unobstructed Vertical	16	500	5,000

Authority for Requirement: Iowa DNR Construction Permits listed in Table Non PSD Cells – Emission Point Characteristics

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: Non Permitted Test Cells

### Associated Equipment

Associated Emission Unit ID Numbers: See Table: Non Permitted Test Cells

Table: Non Permitted Test Cells

(Note: The following non-permitted cells were built, modified, reconstructed or altered prior to September 23, 1970 and no construction permits are required at this time.)

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity
2A-05	2A-05	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2A-06	2A-06	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2A-07A	2A-07	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2A-07B				
2A-09	2A-09	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2A-10	2A-10	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2B-02	2B-02	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2B-03	2B-03	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2B-04	2B-04	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2B-05	2B-05	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2C-02	2C-02	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2C-03	2C-03	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2C-04	2C-04	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2C-05	2C-05	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2C-06	2C-06	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2C-08	2C-08	Transmission Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-02	2N-02	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-03	2N-03	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-04	2N-04	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-05	2N-05	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-07	2N-07	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-08	2N-08	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-10A <sup>(2)</sup>	2N-10	Diesel Engine Test Cell	Diesel <sup>(1)</sup>	24.5 gal/hr, 1,000 hp
2N-10B <sup>(2)</sup>				
2N-10C <sup>(2)</sup>				
2N-10D <sup>(2)</sup>				

<sup>(1)</sup> The fuel may also include biodiesel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.

<sup>(2)</sup> Only one of the emission points for this unit can be used at a time.

## Applicable Requirements

### Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

*The emissions from these emission points shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40%

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)<sup>(1)</sup>

Emission Limits: 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)<sup>(2)</sup>

Emission Limit(s): 2.5 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(3)"b"(2)

<sup>(1)</sup> This limit is for burning natural gas and other gaseous fuel.

<sup>(2)</sup> This limit is for burning liquid fuel.

### Operational Limits & Requirements

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

See Plant-Wide Operational Limits & Requirements

### Monitoring Requirements

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Numbers: See Table: Oil Mist Eliminators**

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Oil Mist Eliminators  
 Emissions Control Equipment ID Number: See Table: Oil Mist Eliminators  
 Emissions Control Equipment Description: See Table: Oil Mist Eliminators

Table: Oil Mist Eliminators

<b>Emission Point Number</b>	<b>Associated Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>Control Equipment Number</b>	<b>Control Equipment Description</b>	<b>Raw Material</b>	<b>Rated Capacity</b>
2EWME1	2EWME1 <sup>(1)</sup>	Oil Mist Eliminator	2EWME1	Oil Mist Eliminator	Oil	0.0182 lb/hr
2EWME2	2EWME2 <sup>(2)</sup>	Oil Mist Eliminator	2EWME2	Oil Mist Eliminator	Oil	0.0182 lb/hr

<sup>(1)</sup> Construction permit 97-A-790-S2 specifies that this unit connects to test cells EU 2EW-09 through 2EW-16.

<sup>(2)</sup> Construction permit 97-A-791-S2 specifies that this unit connects to test cells EU 2EA, 2EB, 2EC, 2ED, and 2EW-01 through 2EW-08.

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40%<sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permits 97-A-790-S2 (2EWME1) and 97-A-791-S2 (2EWME2)  
 567 IAC 23.3(2)"d"

<sup>(1)</sup> An exceedance of the indicator opacity of (25%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permits 97-A-790-S2 (2EWME1) and 97-A-791-S2 (2EWME2)

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

**Operating Limits:**

1. No more than eight engine test cells (that vent through mist eliminator 2EWME1) may be operated at any one time.
2. No more than twelve engine test cells (that vent through mist eliminator 2EWME2) may be operated at any one time.

Authority for Requirement: Iowa DNR Construction Permits 97-A-790-S2 (2EWME1) and 97-A-791-S2 (2EWMW2)

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 34

Stack Opening, (inches, dia.): 9

Exhaust Flow Rate (scfm): 1,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical

Authority for Requirement: Iowa DNR Construction Permits 97-A-790-S2 (2EWME1) and 97-A-791-S2 (2EWMW2)

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

*The data pertaining to the plan should be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 2NX6**

### Associated Equipment

Associated Emission Unit ID Number: 2NX6, 2NX6-FO

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Emission Unit vented through this Emission Point: 2NX6  
Emission Unit Description: Boiler – Wind Tunnel (Natural Gas)  
Raw Material/Fuel: Natural Gas  
Rated Capacity: 0.0025 MMcf/hr

Emission Unit vented through this Emission Point: 2NX6-FO  
Emission Unit Description: Boiler – Wind Tunnel (Fuel Oil)  
Raw Material/Fuel: Fuel Oil  
Rated Capacity: 20 gallons/hr

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity  
Emission Limit: 40%  
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: PM  
Emission Limit: 0.6 lb/MMBtu  
Authority for Requirement: 567 IAC 23.3(2)"b"

Pollutant: SO<sub>2</sub>  
Emission Limit: 2.5 lb/MMBtu while firing fuel oil  
Authority for Requirement: 567 IAC 23.3(3)"b"

Pollutant: SO<sub>2</sub>  
Emission Limit: 500 ppmv while firing natural gas  
Authority for Requirement: 567 IAC 23.3(3)"e"

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

See Plant-Wide Operational Limits & Requirements

**Process throughput:**

No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

**Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 3a, 3b, and 3c**

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Boilers

Table Boilers

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
3A	3A	Boiler 15 (Natural Gas)	Natural Gas	14.645 MMBtu/hr
	3A-FO	Boiler 15 (Fuel Oil)	No.2 Fuel Oil	104.5 gallons/hr
3B	3B	Boiler 16 (Natural Gas)	Natural Gas	14.645 MMBtu/hr
	3B-FO	Boiler 16 (Fuel Oil)	No.2 Fuel Oil	104.5 gallons/hr
3C	3C	Boiler 17 (Natural Gas)	Natural Gas	14.645 MMBtu/hr
	3C-FO	Boiler 17 (Fuel Oil)	No.2 Fuel Oil	104.5 gallons/hr

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40%

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2 (3A), 91-A-172-S3 (3B) and 94-A-188-S2 (3C)  
567 IAC 23.3(2)"d"

<sup>(1)</sup> An exceedence of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter

Emission Limit: 0.6 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2 (3A), 91-A-172-S3 (3B) and 94-A-188-S2 (3C)  
567 IAC 23.3(2)"b"

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.41 lb/hr

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2 (3A), 91-A-172-S3 (3B) and 94-A-188-S2 (3C)

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.41 lb/hr

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2 (3A), 91-A-172-S3 (3B) and 94-A-188-S2 (3C)

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 500 ppmv<sup>(2)</sup> or 2.5 lb/MMBtu<sup>(3)</sup>

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2 (3A), 91-A-172-S3 (3B) and 94-A-188-S2 (3C)  
567 IAC 23.3(3)"e" or 23.3(3)"b"

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)

Emission Limit(s): 3.49 lb./hr.

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2 (3A), 91-A-172-S3 (3B) and 94-A-188-S2 (3C)

<sup>(2)</sup> For firing on natural gas

<sup>(3)</sup> For firing on fuel oil

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

See Plant-Wide Operational Limits and Requirements

#### **NSPS Subpart Dc Requirements:**

These emission units are subject to Subpart A (General Provisions) and Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) of the New Source Performance Standards (NSPS). The specific requirements are included in the following Process Throughput and Reporting & Recordkeeping sections. These sections include the alternative (i.e., reduced) recordkeeping and reporting requirements allowed by EPA Region VII. Failure to specifically include all of the requirements of the NSPS in this permit does not relieve the owner or operator of those requirements.

Authority for Requirement: 40 CFR 60.40c

567 IAC 23.1(2)"III"

Iowa DNR Construction Permits 91-A-171-S2, 91-A-172-S3, and  
94-A-188-S2

#### **Process throughput:**

1. The fuel shall be limited to natural gas, Fuel Oil #1 or Fuel Oil #2.

2. The sulfur content of the fuel oil shall not exceed 0.5% by weight.
3. The quantity of fuel oil used in each of the three boilers shall not exceed 173,250 gallons per 12-month rolling total.

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2, 91-A-172-S3 and 94-A-188-S2

**Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The facility shall record the type and amount of fuel combusted in the boiler on a monthly basis. Documentation may be in the form of fuel bills or meter readings, or other records that adequately document fuel usage.
2. The facility shall record the sulfur content of any diesel fuel oil #2 combusted in the boilers. The sulfur content shall be determined based on fuel supplier certification. The certification shall include the information required under 40 CFR 60.48c(f)(1).
3. The facility shall submit a copy of all excess emission reports required for Subpart Dc. Per the reduced recordkeeping for Subpart Dc the facility may report excess emissions (or lack thereof) on an annual frequency if only natural gas is combusted in the boilers. Should either of these sources fire any diesel fuel oil #2 during a quarter, whether as an emergency or backup fuel or not, it will be considered subject to the sulfur dioxide emission limitations and required to provide a quarterly compliance report. It should be noted that, per permit Condition 7 of the Iowa DNR Construction Permits 91-A-171-S1, 91-A-172-S2 and 94-A-188-S1, the facility is also required to orally notify the DNR field office of excess emissions within 8 hours and submit a written report within 7 days.

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S2, 91-A-172-S3 and 94-A-188-S2

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

Table Boiler-4

<b>Emission Point</b>	<b>Stack Height (feet, from ground)</b>	<b>Discharge Style</b>	<b>Stack Size (in., dia.)</b>	<b>Exhaust Temperature (°F):</b>	<b>Exhaust Flowrate (scfm)</b>	<b>Iowa DNR Construction Permits</b>
3A	52	Vertical Obstructed	20	320	2,919	91-A-171-S2
3B	52	Vertical Obstructed	20	320	2,919	91-A-172-S3
3C	28	Vertical Obstructed	20	320	2,919	94-A-188-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the

emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR Construction Permits referenced in Table Boiler-4.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 5N**

### Associated Equipment

Associated Emission Unit ID Number: 5N  
Associated Control Equipment ID Number: 5N  
Associated Control Equipment Description: Dry Filter

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Emission Unit vented through this Emission Point: 5N  
Emission Unit Description: Paint Booth  
Raw Material/Fuel: Paint  
Rated Capacity: 4.7 lb/hr

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

Pollutant: Opacity  
Emission Limit: 40% <sup>(1)</sup>  
Authority for Requirement: Iowa DNR Construction Permit 80-A-008-S2  
567 IAC 23.3(2)"d"

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM  
Emission Limit: 0.01 gr/dscf  
Authority for Requirement: Iowa DNR Construction Permit 80-A-008-S2  
567 IAC 23.4(13)

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### **NESHAP Requirements**

This emission unit is subject to Subpart A (General Provisions) and Subpart HHHHHH (National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources), 40 CFR §63.11169 through 40 CFR §63.11180 as an existing source. The facility is considered exempt to this subpart since the facility spray applies no coatings that contain the target HAPs. Target HAPs are compounds of chromium (Cr), lead

(Pb), manganese (Mn), nickel (Ni), or cadmium (Cd). Should the facility change its operations to include spray applying coating that contain the target HAP, the facility shall be required to comply with the requirements of Subpart HHHHHH.

Authority for Requirement: 40 CFR 63.11169  
567 IAC 23.1(4)"eh"  
Iowa DNR Construction Permit 80-A-008-S2

Process throughput:

1. The maximum amount of surface coating materials (i.e. paint, primer, thinner, etc.) used in the paint booth shall not exceed 2,250 gallons per twelve-month rolling period.
2. The maximum VOC content of any surface coating materials (i.e., paint, primer, thinner, etc.) used in the paint booth (EU-5N) shall not exceed 8.0 pounds VOC per gallon.
3. The maximum individual HAP content of any surface coating materials (i.e., paint, primer, thinner, etc.) used in the paint booth (EU-5N) shall not exceed 4.0 pounds individual HAP per gallon.
4. The facility shall not use any surface coating materials that contain target HAP, as defined in Subpart HHHHHH, 40 CFR 63 §63.11180. Target HAP are compounds of chromium (Cr), lead (Pb), manganese (Mn), Nickel (Ni), or cadmium (Cd).

Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The permit holder, owner or operator of the facility shall calculate and record the monthly total and the 12-month rolling total amount of each material used in the paint booth (EU-5N), in gallons.
2. The permit holder, owner or operator of the facility shall record the VOC content of any surface coating material (i.e., paint, primers, solvents, etc.) used in the booth (EU-5N), in pounds per gallon.
3. The permit holder, owner or operator of the facility shall record the individual HAP content of any surface coating material (i.e., paint, primers, solvents, etc.) used in the booth (EU-5N), in pounds per gallon.
4. The permit holder, owner or operator of the facility shall maintain manufacturer/vendor provided information (i.e., Material Safety Data Sheets (MSDS), technical data sheets, etc.) of all materials used in the affected paint booth, which clearly indicates the VOC and HAP content of that material.

Authority for Requirement: Iowa DNR Construction Permit 80-A-008-S2

**Emission Point Characteristics**

*This emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 36.6

Stack Opening, (inches, dia.): 48

Exhaust Flow Rate (acfm): 42,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical unobstructed

Authority for Requirement: Iowa DNR Construction Permit 80-A-008-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.*

*The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Numbers: T1, T2, and T3

### Associated Equipment

Table Tank-1

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
T1	T1	Diesel Tank 1	Diesel Fuel	20,000 gallons
T2	T2	Diesel Tank 2	Diesel Fuel	20,000 gallons
T3	T3	Diesel Tank 3	Diesel Fuel	20,000 gallons

### Applicable Requirements

#### Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

*The emissions from these emission points shall not exceed the levels specified below.*

There are no emission limits at this time.

#### Operational Limits & Requirements

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

#### Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. A Material Safety Data Sheet (MSDS) for any material stored in the tanks.
2. Determine the annual throughput of material for each tank on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits 99-A-793 (T1), 99-A-794 (T2) and 99-A-795 (T3)

#### Emission Point Characteristics

*These emission points shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 25

Stack Opening, (inches, dia.): 4

Exhaust Flow Rate (acfm): 0

Exhaust Temperature (°F): 70

Discharge Style: Downward

Authority for Requirement: Iowa DNR Construction Permits 99-A-793 (T1), 99-A-794 (T2) and 99-A-795 (T3)

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: See Table: Emergency Diesel Generators**

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Emergency Diesel Generators

Table: Emergency Diesel Generators

<b>Emission Point Number</b>	<b>Associated Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>Raw Material</b>	<b>Rated Capacity</b>
2N-01A	2N-01A	Emergency Generator - Crit. (0.05 MMBtu/hr, Diesel)	Diesel Fuel	0.05MMBtu/hr
2N-01B	2N-01B	Emergency Generator – Plant (240 hp, Diesel)	Diesel Fuel	240 BHP

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 2.5 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(b)"2"

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Process throughput:

1. No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

**Reporting & Record keeping:**

The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

**NESHAP:**

These emission units are affected reciprocating internal combustion engine that are subject to 40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 63.6590(a)(1)(iii) these are existing stationary RICE located at an area source and they were constructed prior to June 12, 2006.

**Compliance Date**

Per 63.6595 you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

**Operating Conditions 40 CFR 63.6603(a)**

1. Change oil and filter every 500 hours of operation or annually, whichever comes first.
2. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first and
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

**Maintenance Requirements 40 CFR 63.6625**

1. Must operate and maintain the stationary RICE according to the manufacturer's emission related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
2. If you operate an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.
3. You must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c and 2d to the subpart apply.

Operating Limits 40 CFR 63.6640(f)

1. Operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year is prohibited.
2. There is no time limit on the use of emergency stationary RICE in emergency situations.
3. Maintenance and readiness checks are limited to 100 hours per year.
4. You may operate your emergency stationary RICE up to 50 hours per year for non-emergency situations, but those 50 hours are counted toward the 100 hours of maintenance and testing. See 40 CFR 63.6640(f)(4) for additional information.

Reports & Records

See 40 CFR 63.6650 and 63.6655 for a complete list and description.

An initial notification is not required per 40 CFR 63.6645(a)(5)

Authority for Requirement: 567 IAC 23.1(4)"cz"  
40 CFR Part 63 Subpart ZZZZ

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 12**

### Associated Equipment

Associated Emission Unit ID Number: 12

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Emission Unit vented through this Emission Point: 12  
Emission Unit Description: Emergency Office Generator  
Raw Material/Fuel: Natural Gas  
Rated Capacity: 20 Bhp

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity  
Emission Limit: 40%  
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: PM  
Emission Limit: 0.1 gr/dscf  
Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: SO<sub>2</sub>  
Emission Limit: 500 ppmv  
Authority for Requirement: 567 IAC 23.3(3)"e"

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### NESHAP:

This emission units unit is an emergency spark ignited stationary reciprocating internal combustion engine located at an area source, subject to 40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 63.6590(a)(1)(iii) this is an existing stationary RICE as it was constructed prior to June 12, 2006.

#### Compliance Date

Per 63.6595 you must comply with the applicable operating limitations no later than October 19, 2013.

Operating Conditions 40 CFR 63.6603(a) See also Table 2d.

1. Change oil and filter every 500 hours of operation or annually, whichever comes first.<sup>1</sup>
2. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first and
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

<sup>1</sup> Sources have the option to utilize an oil analysis program as described in 63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

Maintenance Requirements 40 CFR 63.6625

1. Must operate and maintain the stationary RICE according to the manufacturer's emission related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
2. You must install a non-resettable hour meter if one is not already installed.
3. You must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c and 2d to the subpart apply.
4. You have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before

commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

Compliance Requirements 40 CFR 63.6605 & 63.6640

1. You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.
2. At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
3. You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.
4. You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.
5. (f) Requirements for emergency stationary RICE. (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i)

through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for nonemergency engines.

- (i) There is no time limit on the use of emergency stationary RICE in emergency situations.
- (ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
- (iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for nonemergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

#### Reports & Records

See 40 CFR 63.6655 (except 63.6655 (c)) for a complete list and description. An initial notification is not required per 40 CFR 63.6645(a)(5)

#### General Provisions

Yes, except per 63.6645(a)(5), the following do not apply: 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b)-(e), (g) and (h).

Authority for Requirement: 567 IAC 23.1(4) "a" & "cz"  
40 CFR Part 63, Subpart A & ZZZZ

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

## **IV. General Conditions**

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

### **G1. Duty to Comply**

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

### **G2. Permit Expiration**

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

### **G3. Certification Requirement for Title V Related Documents**

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

### **G4. Annual Compliance Certification**

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance

status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

#### **G5. Semi-Annual Monitoring Report**

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

#### **G6. Annual Fee**

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
  - a. Form 1.0 "Facility Identification";
  - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
  - c. Form 5.0 "Title V annual emissions summary/fee"; and
  - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
  - a. Form 1.0 "Facility Identification";
  - b. Form 5.0 "Title V annual emissions summary/fee";
  - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.

7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.

8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

#### **G7. Inspection of Premises, Records, Equipment, Methods and Discharges**

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

#### **G8. Duty to Provide Information**

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

#### **G9. General Maintenance and Repair Duties**

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

#### **G10. Recordkeeping Requirements for Compliance Monitoring**

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:

- a. The date, place and time of sampling or measurements
- b. The date the analyses were performed.
- c. The company or entity that performed the analyses.
- d. The analytical techniques or methods used.
- e. The results of such analyses; and
- f. The operating conditions as existing at the time of sampling or measurement.
- g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)

2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample,

measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

- a. Comply with all terms and conditions of this permit specific to each alternative scenario.
- b. Maintain a log at the permitted facility of the scenario under which it is operating.
- c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

#### **G11. Evidence used in establishing that a violation has or is occurring.**

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

*1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:*

- a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
- b. Compliance test methods specified in 567 Chapter 25; or
- c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

- a. Any monitoring or testing methods provided in these rules; or
- b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

#### **G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

#### **G13. Hazardous Release**

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

#### **G14. Excess Emissions and Excess Emissions Reporting Requirements**

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing

emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

## 2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1) ) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.

- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

**G15. Permit Deviation Reporting Requirements**

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

**G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations**

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

**G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification**

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:
  - a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
  - b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
  - c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
  - d. The changes are not subject to any requirement under Title IV of the Act.
  - e. The changes comply with all applicable requirements.
  - f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
    - i. A brief description of the change within the permitted facility,
    - ii. The date on which the change will occur,
    - iii. Any change in emission as a result of that change,
    - iv. The pollutants emitted subject to the emissions trade
    - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
    - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
    - vii. Any permit term or condition no longer applicable as a result of the change.
2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*
3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

#### **G18. Duty to Modify a Title V Permit**

1. Administrative Amendment.

- a. An administrative permit amendment is a permit revision that is required to do any of the following:
  - i. Correct typographical errors
  - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - iii. Require more frequent monitoring or reporting by the permittee; or
  - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
- b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
- c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

## 2. Minor Permit Modification.

- a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
  - i. Do not violate any applicable requirements
  - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
  - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
  - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
  - v. Are not modifications under any provision of Title I of the Act; and
  - vi. Are not required to be processed as significant modification.
- b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
  - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
  - ii. The permittee's suggested draft permit
  - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
  - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113* The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.105(1)"a"(4)*

#### **G19. Duty to Obtain Construction Permits**

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *567 IAC 22.1(1)*

#### **G20. Asbestos**

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations, training fires and controlled burning of a demolished building. *567 IAC 23.1(3)"a", and 567 IAC 23.2*

#### **G21. Open Burning**

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"h"; 567 IAC 23.2(3)"h" - State Only*

#### **G22. Acid Rain (Title IV) Emissions Allowances**

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

### **G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements**

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
  - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
  - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

### **G24. Permit Reopenings**

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
  - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
  - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.
  - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a"*, *567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
  - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
  - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
  - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
  - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
  - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

## **G25. Permit Shield**

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

- a. Such applicable requirements are included and are specifically identified in the permit;  
or
  - b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
  3. A permit shield shall not alter or affect the following:
    - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
    - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
    - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
    - d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

#### **G26. Severability**

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

#### **G27. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

#### **G28. Transferability**

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

#### **G29. Disclaimer**

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

#### **G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification**

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as

rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator  
Iowa DNR, Air Quality Bureau  
7900 Hickman Road, Suite #1  
Windsor Heights, IA 50324  
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

*567 IAC 25.1(7)"a", 567 IAC 25.1(9)*

### **G31. Prevention of Air Pollution Emergency Episodes**

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.

*567 IAC 26.1(1)*

### **G32. Contacts List**

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits  
EPA Region 7  
Air Permits and Compliance Branch  
901 N. 5<sup>th</sup> Street  
Kansas City, KS 66101  
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau  
Iowa Department of Natural Resources  
7900 Hickman Road, Suite #1  
Windsor Heights, IA 50324  
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

#### **Field Office 1**

909 West Main – Suite 4  
Manchester, IA 52057  
(563) 927-2640

#### **Field Office 2**

2300-15th St., SW  
Mason City, IA 50401  
(641) 424-4073

**Field Office 3**  
1900 N. Grand Ave.  
Spencer, IA 51301  
(712) 262-4177

**Field Office 4**  
1401 Sunnyside Lane  
Atlantic, IA 50022  
(712) 243-1934

**Field Office 5**  
401 SW 7<sup>th</sup> Street, Suite I  
Des Moines, IA 50309  
(515) 725-0268

**Field Office 6**  
**1023 West Madison Street**  
Washington, IA 52353-1623  
(319) 653-2135

**Polk County Public Works Dept.**  
Air Quality Division  
5885 NE 14th St.  
Des Moines, IA 50313  
(515) 286-3351

**Linn County Public Health Dept.**  
Air Pollution Control Division  
501 13th St., NW  
Cedar Rapids, IA 52405  
(319) 892-6000