

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

**Name of Permitted Facility: CF Industries Nitrogen, LLC –
Port Neal Nitrogen Complex**
Facility Location: 1182 260th Street, Sergeant Bluff, Iowa 51054
Air Quality Operating Permit Number: 99-TV-024R4
Expiration Date: January 19, 2028
Permit Renewal Application Deadline: July 19, 2027

EIQ Number: 92-4988
Facility File Number: 97-01-030

Responsible Official

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Title: General Manager
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Permit Contact Person for the Facility

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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.

For the Director of the Department of Natural Resources

Marnie Stein

01/20/2023

Marnie Stein, Supervisor of Air Operating Permits Section

Date

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Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
CE	control equipment
CEM.....	continuous emission monitor
°F	degrees Fahrenheit
EIQ.....	emissions inventory questionnaire
EP.....	emission point
EU	emission unit
gr./dscf	grains per dry standard cubic foot
gr./100 cf.....	grains per one hundred cubic feet
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
MVAC.....	motor vehicle air conditioner
NAICS.....	North American Industry Classification System
NSPS	new source performance standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
ppmv	parts per million by volume
lb./hr	pounds per hour
lb./MMBtu	pounds per million British thermal units
SCC.....	Source Classification Codes
scfm.....	standard cubic feet per minute
SIC	Standard Industrial Classification
TPY.....	tons per year
USEPA.....	United States Environmental Protection Agency

Pollutants

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

I. Facility Description and Equipment List

Facility Name: CF Industries Nitrogen, LLC - Port Neal Nitrogen Complex

Permit Number: 99-TV-024R4

Facility Description: Nitrogenous Fertilizers (SIC 2873)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
EP-01N	EU-01N	Industrial Boiler D	96-A-143-S3
EP-02	EU-02	Industrial Boiler B	95-A-396-S3
EP-04	EU-04	Primary Reformer	95-A-460-P5
	EU-04A	Auxiliary Boiler	
EP-05	EU-05	Carbon Dioxide Regenerator	95-A-463-S2
EP-07	EU-07	Nitric Acid Plant #1	95-A-470-S10
EP-08	EU-08	Ammonium Nitrate Neutralizer and UAN Evaporator	95-A-467-S5
EP-20	EU-20	Pre-shift	95-A-462-S1
	EU-20A	Pre-Methanator	
EP-21	EU-21	Ammonia Synthesis Start-up Heater	95-A-466-S1
EP-23	EU-23	Wastewater Evaporator	95-A-468-S3
EP-24	EU-24	Ammonia Flare Pilot Burner	95-A-469-S4
	EU-24A	Ammonia Flare	
EP-25	EU-25	Nitric Acid Plant #2	95-A-810-S5
EP-27	EU-27	Pilot Burner for Ammonia Flare	13-A-033-S2
	EU-27A	Ammonia Flare	
		Non-Ammonia Process Gases	
EP-29	EU-29	Haul Road	Grandfathered
EP-29A	EU-29A	North Plant Main Road	13-A-223-P3
EP-29B	EU-29B	Connector Road	15-A-580-P1
EP-29C	EU-29C	Inner Plant Road	15-A-581-P3
EP-200	EU-200	Primary Reformer	13-A-207-P4
EP-201	EU-201	Carbon Dioxide Regenerator	13-A-208-P2
EP-202	EU-202	Condensate Steam Stripper	13-A-209-P1
EP-203	EU-203	MDEA Storage Tank	13-A-254-P
EP-204	EU-204	Hydrogen Recovery Unit	13-A-210-P2
EP-205	EU-205	Startup Heater	13-A-211-P3
EP-206	EU-206A	Syngas Flare	13-A-212-P4
	EU-206B	Pilot Burner for Syngas Flare	
EP-207	EU-207A	Ammonia Flare	13-A-213-P4
	EU-207B	Pilot Burner for Ammonia Flare	

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
EP-208	EU-208A	Ammonia Storage Tank Flare	13-A-214-P2
	EU-208B	Pilot Burner for Ammonia Storage Tank Flare	
EP-300	EU-300A	Urea Granulation Process	13-A-215-P4
	EU-300B	Granulation Air Heaters	
	EU-305	LP Offgases Absorber	
EP-301	EU-301	Urea UF-85 Storage Tank	13-A-216-P3
EP-302	EU-302	VOC Emissions from Equipment Leaks	13-A-229-P1
EP-303	EU-303	Urea Railcar Loading	13-A-217-P
EP-304	EU-304	Urea Truck Loading	13-A-218-P
EP-305	EU-305	LP Offgases Absorber Vent	13-A-219-P1
EP-307	EU-307	CO2 Silencer	13-A-221-P
EP-400	EU-400	Boiler A	13-A-234-P4
EP-401	EU-401	Boiler B	13-A-235-P4
EP-402A	EU-402A	Urea Cooling Tower	13-A-236-P1
EP-402B	EU-402B	Ammonia 2 Cooling Tower	13-A-237-P2
EP-403	EU-403	Emergency Generator 1	13-A-238-P2
EP-404	EU-404	Emergency Generator 2	13-A-239-P2
EP-405	EU-405	Diesel Belly Tank 1	13-A-240-P1
EP-406	EU-406	Diesel Belly Tank 2	13-A-241-P1
EP-407	EU-407	Hydrated Lime Silo	14-A-403-P1
EP-408	EU-408	Soda Ash Silo	14-A-404-P1
EP-409	EU-409	North Admin Building Emergency Generator	15-A-582-P2
EP-410	EU-410	Fire Pump Emergency Engine 1	15-A-583-P1
EP-411	EU-411	Fire Pump Emergency Engine 2	15-A-584-P1
EP-412	EU-412	Diesel Fire Pump Tank 1	15-A-585-P
EP-413	EU-413	Diesel Fire Pump Tank 2	15-A-586-P
EP-650	EU-650	Caterpillar C15 Air Compressor Engine	12-A-084
EP-651	EU-651	Generac SD080 Generator Diesel Engine	Exempt
EP-652	EU-652	Generac SD150 Generator Diesel Engine	Exempt
EP-653	EU-653	Caterpillar Fire Water Pump B Diesel Engine	Exempt
EP-654	EU-654	Caterpillar Fire Water Pump A Diesel Engine	Exempt
EP-656	EU-656	Generac SG060 S. Admin Building Generator Engine	Exempt

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
EU-20B	104F Vent
EU-26	Spent Lime Pile
EU-32	MDEA Storage Tank (20,000 gallons)
EU-33	MDEA Additive Storage Tank (4,040 gallons)
EU-39 through EU-56 EU-59 through EU-110	Storage Tanks (50 to 5,280,000 gallons)
EU-639	Lime Unloading
T2201JB	Fire Water Pump 2201-JB Diesel Tank (300 gallons)
T2201JA	Fire Water Pump 2201-JA Diesel Tank (300 gallons)
T2044J	Caterpillar Air Compressor 2044-J Diesel Tank (500 gallons)
T101N	Emergency Generator 101-N Diesel Tank (50 gallons)
T460J	Emergency Generator 460-J Diesel Tank (50 gallons)
TSwitch	Switch Locomotive Diesel Tank (500 gallons)
TDGas	Fuel Depot Gasoline Tanks (1000 gallons total)
TDDiesel	Fuel Depot Diesel Tanks (1000 gallons total)
TB201K	Used Oil Tanks at Bldg 201K (1000 gallons total)
TB801K	Used Oil Tank at Bldg 801K (500 gallons)
TPond	Used Oil Tank at Retention Pond (550 gallons)
TB115K	Used Oil Tank at Bldg 115K (500 gallons)
90D104	Sulfuric Acid Tanks (12,400 gallons total)
88D251	
88D211	Corrosion Inhibitor Storage Tank (400 gallons)

II. Plant-Wide Conditions

Facility Name: CF Industries Nitrogen, LLC - Port Neal Nitrogen Complex
Permit Number: 99-TV-024R4

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

Permit Duration

The term of this permit is: 5 years from permit issuance date
Commencing on: January 20, 2023
Ending on: January 19, 2028

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.

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 (SO₂): 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 on or 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 - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits 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 roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. (the preceding sentence is State Only) 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 public 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 be 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, fertilizer 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.
6. Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

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

40 CFR 60 Subpart A Requirements

This facility is an affected source and these *General Provisions* apply to the facility.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart A
567 IAC 23.1(2)

40 CFR 60 Subpart Db Requirements

This facility is subject 40 CFR Subpart Db – Standards of Performance for *Industrial-Commercial-Institutional Steam Generating Units*. The affected units are EU-400 and EU-401.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart Db
567 IAC 23.1(2)"ccc"

40 CFR 60 Subpart Dc Requirements

This facility is subject 40 CFR Subpart Dc – Standards of Performance for *Small Industrial-Commercial-Institutional Steam Generating Units*. The affected units are EU-01N and EU-300B. See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart Dc
567 IAC 23.1(2)"III"

40 CFR 60 Subpart G Requirements

This facility is subject 40 CFR Subpart G – Standards of Performance for *Nitric Acid Plants*. The affected unit is EU-25.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart G
567 IAC 23.1(2)"d"

40 CFR 60 Subpart Ga Requirements

This facility is subject 40 CFR Subpart Ga – Standards of Performance for *Nitric Acid Plants for which Construction, Reconstruction or Modification Commenced after October 14, 2011*. The affected unit is EU-07.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart Ga
567 IAC 23.1(2)"bbbb"

40 CFR 60 Subpart IIII Requirements

This facility is subject 40 CFR Subpart IIII – Standards of Performance for *Stationary Compression Ignition Internal Combustion Engines*. The affected units are EU-403, EU-404, EU-410, EU-411, and EU-650. Applicable requirements are incorporated in the Emission Point Specific conditions.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart IIII
567 IAC 23.1(2)"yyy"

40 CFR 60 Subpart VVa Requirements

This facility is subject 40 CFR Subpart VVa - Standards of Performance for *Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006*. The affected unit is EU-302. Applicable requirements are incorporated in the Emission Point Specific conditions.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart VVa
567 IAC 23.1(2)"nn"

40 CFR 60 Subpart JJJJ Requirements

This facility is subject 40 CFR Subpart JJJJ - Standards of Performance for *Stationary Spark Ignition Internal Combustion Engines*. The affected units are EU-409 and EU-656. Applicable requirements are incorporated in the Emission Point Specific conditions.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart JJJJ
567 IAC 23.1(2)"zzz"

40 CFR 63 Subpart A Requirements

These *General Provisions* apply to the facility.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 63 Subpart A
567 IAC 23.1(4)"a"

40 CFR 63 Subpart ZZZZ Requirements

This facility is subject 40 CFR Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for *Stationary Reciprocating Internal Combustion Engines*. The affected units are EU-403, EU-404, EU-409, EU-410, EU-411, EU-650, EU-651, EU-652, EU-653, EU-654, and EU-656. Applicable requirements are incorporated in the Emission Point Specific conditions.

See Appendix for a link to the Standard.

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

40 CFR 63 Subpart FFFF Requirements

This facility is subject 40 CFR Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for *Miscellaneous Organic Chemical Manufacturing*. The affected units are EU-301 and EU-302. Applicable requirements are incorporated in the Emission Point Specific conditions.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart FFFF
567 IAC 23.1(4)"cf"

40 CFR 63 Subpart DDDDD Requirements

This facility is subject 40 CFR Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for *Industrial, Commercial, And Institutional Boilers and Process Heaters*. The affected units are EU-01N, EU-02, EU-04, EU-04A, EU-21, EU-200, EU-205, EU-400, and EU-401. Applicable requirements are incorporated in the Emission Point Specific conditions.

See Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 63 Subpart DDDDD

III. Emission Point-Specific Conditions

Emission Point ID Number: EP-01N

Associated Equipment

Associated Emission Unit ID Numbers: EU-01N

Emission Unit vented through this Emission Point: EU-01N

Emission Unit Description: Industrial Boiler D

Raw Material/Fuel: Natural Gas

Rated Capacity: 90 MMBtu/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(s): 0%

Authority for Requirement: DNR Construction Permit 96-A-143-S3
567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: DNR Construction Permit 96-A-143-S3
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 11.0 lb/hr; 48.2 ton/yr

Authority for Requirement: DNR Construction Permit 96-A-143-S3

Operational Limits & Requirements

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

Operating Limits

- A. This unit shall combust natural gas only.
- B. The maximum heat input of this unit shall not exceed 90 MMBTU/hr.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The type and quantity of each fuel consumed in this unit shall be recorded hourly. A flow meter must be installed to monitor the quantity of fuel being consumed in this unit.
- B. A fuel analysis must be obtained documenting the heat content of the fuel at the beginning of each quarter.
- C. The hourly heat input rate shall be calculated at the end of each hour by multiplying the hourly fuel consumption by the heat content of the fuel obtained at the beginning of the current quarter.

Authority for Requirement: DNR Construction Permit 96-A-143-S3

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart Dc – *Small Industrial-Commercial-Institutional Steam Generating Units* and Subpart A – *General Provisions*.

Authority for Requirement: DNR Construction Permit 96-A-143-S3
40 CFR 60 Subpart Dc
567 IAC 23.1(2)"III"

This boiler is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart DDDDD - *Industrial, Commercial, and Institutional Boilers and Process Heaters* and Subpart A – *General Provisions*.

Authority for Requirement: 40 CFR 63 Subpart DDDDD

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 50
- Stack Opening, (inches, dia.): 46
- Exhaust Flow Rate (scfm): 20,000
- Exhaust Temperature (°F): 300
- Discharge Style: Vertical, Unobstructed
- Authority for Requirement: DNR Construction Permit 96-A-143-S3

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-02

Associated Equipment

Associated Emission Unit ID Numbers: EU-02

Emission Unit vented through this Emission Point: EU-02

Emission Unit Description: Industrial Boiler B

Raw Material/Fuel: Natural Gas

Rated Capacity: 79 MMBtu/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(s): 0%

Authority for Requirement: DNR Construction Permit 95-A-396-S3
567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.8 lb/MMBtu

Authority for Requirement: 567 IAC 23.2(2) "b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

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

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 11.1 lb/hr; 39.5 ton/yr

Authority for Requirement: DNR Construction Permit 95-A-396-S3

Operational Limits & Requirements

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

Operating Limits

A. This unit shall be operated on natural gas only.

B. The fuel usage for this unit shall be limited to 563,710,000 cubic feet of natural gas per twelve-month rolling period.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- 1. A record of the twelve (12) month rolling total, rolled monthly, fuel usage shall be maintained. This record shall include fuel type and the amount used.

Authority for Requirement: DNR Construction Permit 95-A-396-S3

NSPS and NESHAP Applicability

This boiler is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart DDDDD - Industrial, Commercial, and Institutional Boilers and Process Heaters and Subpart A – General Provisions.

Authority for Requirement: 40 CFR 63 Subpart DDDDD

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 50

Stack Opening, (inches, ft): 3.83

Exhaust Flow Rate (scfm): 18,271

Exhaust Temperature (°F): 300

Discharge Style: Vertical, Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-396-S3

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-04

Associated Equipment

Associated Emission Unit ID Numbers: EU-04, EU-04A
 Emissions Control Equipment ID Number: CE 04
 Emissions Control Equipment Description: EU-04: Low NO_x Burners
 Continuous Emissions Monitors ID Numbers: ME-04

EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EU-04	Primary Reformer	Natural Gas and Process Gas	420 MMBtu/hr	95-A-460-P5
		Ammonia	54.17 tons/hr	
EU-04A	Auxiliary Boiler	Natural Gas	180 MMBtu/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(s): 40%⁽¹⁾

Authority for Requirement: DNR Construction Permit 95-A-460-P5
 567 IAC 23.3(2) "d"

⁽¹⁾ An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or 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 Department may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu

Authority for Requirement: DNR Construction Permit 95-A-460-P5
 567 IAC 23.2(2) "b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: DNR Construction Permit 95-A-460-P5
 567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 80.0 lb/hr; 262.3 ton/yr

Authority for Requirement: DNR Construction Permit 95-A-460-P5

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 22.19 lb/hr; 97.2 ton/yr, 0.037 lb/MMBtu

Authority for Requirement: DNR Construction Permit 95-A-460-P5

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. The Primary Reformer (EU-04) & Auxiliary Boiler (EU-04A) shall only use natural gas and process gases.
- B. Per 567 IAC 33.3(18)“f”(1), prior to beginning actual construction of project 20-093 the owner or operator shall document and maintain a record of the following:
 - (1) A description of project 20-093,
 - (2) Identification of the emission unit(s) whose emissions of a regulated NSR pollutant could be affected by project 20-093, and
 - (3) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions (BAE), the projected actual emissions (PAE), the amount of emissions excluded under paragraph “3” of the definition of “*projected actual emissions*” in subrule 33.3(1), an explanation describing why such amount was excluded, and any netting analysis if applicable.
- C. Per 567 IAC 33.3(18)“g”, the owner or operator shall make the information required to be documented and maintained pursuant to 567 IAC 33.3(18)“f” available for review upon request for inspection by the Department or the general public pursuant to the requirements for Title V operating permits contained in 567 IAC 22.107(6).
- D. Per 567 IAC 33.3(18)“f”(4), the owner or operator shall:
 - (1) Monitor the emission of CO, PM, PM10 and PM2.5 that is emitted by any emissions unit affected by project 20-093.
 - (2) Calculate the annual emissions, in tons per year on a calendar-year basis, for a period of five (5) years following resumption of regular operations and maintain a record of regular operations after the change.
- E. Per 567 IAC 33.3(18)“f”(5), the owner or operator shall retain a written record containing the information required in condition D above for a period of five (5) years after the project 20-093 is completed.
- F. Per 567 IAC 33.3(18)“f”(7), the owner or operator shall submit a report to the Department within sixty (60) days if the annual emissions exceed the baseline actual emissions calculated for project 20-093 by an amount that is greater than the PSD significant amount.

NSPS and NESHAP Applicability

The primary reformer and auxiliary boiler are subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart DDDDD - Industrial, Commercial, and Institutional Boilers and Process Heaters and Subpart A – General Provisions.

Authority for Requirement: 40 CFR 63 Subpart DDDDD

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 90

Stack Opening, (inches, dia.): 107

Exhaust Flow Rate (scfm): 152,000

Exhaust Temperature (°F): 245

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-460-P5

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Stack Testing: Primary Reformer and Auxiliary Boiler

Pollutant – Carbon Monoxide (CO)

Stack Test to be Completed – Within 60 days after achieving the maximum production rate and no later than 180 days after the initial startup date of the proposed equipment for the addition of new equipment or the physical modification of existing equipment or control equipment.

Test Method – 40 CFR 60, Appendix A, Method 10

Authority for Requirement – Iowa DNR Construction Permit 95-A-460-P5

Continuous Emissions Monitoring (CEMS)

A. The following monitoring systems are required:

(1) NO_x:

The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and record the output of the system, for measuring nitrogen oxide (NO_x) emissions.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply.

O₂ or CO₂:

The owner or operator shall install, calibrate, maintain, and operate a CEMS and record the output of the system, for measuring the oxygen (O₂) or carbon dioxide (CO₂) content of the flue gases at each location where NO_x emissions are monitored.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 3 (PS3) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply.

(2) Flowmeter

The owner or operator shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of 40 CFR 60, Appendix B, Performance Specification 6 and 40 CFR 60, Appendix F, Procedure 1. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow of exhaust gases discharged to the atmosphere.

- B. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits (CGA) and annual relative accuracy test audit (RATA). Annual RATAs and quarterly CGAs are required to be conducted on all CEMS and flowmeters required by this permit. The results shall be reported in units of the standards.

If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

- C. The CEMS required in paragraph A above for NO_x and either O₂ or CO₂ shall be operated and the data recorded during all periods of operation including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments.
- D. The following data requirements shall apply to all CEMS emission standards in this permit:
- (1) The CEMS required by this permit shall be operated and data recorded during all periods of operation of the emission unit except for CEM breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.
 - (2) The 1-hour average NO_x emission rates measured by the CEMS and flow measured by the flowmeter required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.
 - (3) For each hour of missing emission NO_x data, the owner or operator shall substitute data by:
 - (a) If the quarterly monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period

according to the following procedures:

- (i) For the missing data period less than or equal to 24 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (ii) For a missing data period greater than 24 hours, substitute the greater of:
 - The 90th percentile hourly concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
 - The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
- (b) If the quarterly monitor data availability is at least 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
- (i) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (ii) For the missing data period of more than 8 hours, substitute the greater of:
 - The 95th percentile hourly pollutant concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
 - The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
- (c) If the quarterly monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method approved by the Department.

Authority for Requirement: DNR Construction Permit 95-A-460-P5

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-05

Associated Equipment

Associated Emission Unit ID Numbers: EU-05

Emission Unit vented through this Emission Point: EU-05

Emission Unit Description: Carbon Dioxide Regenerator

Raw Material/Fuel: Ammonia

Rated Capacity: 54.17 tons/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(s): 40%

Authority for Requirement: DNR Construction Permit 95-A-463-S2
567 IAC 23.3(2) "d"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 13.1 lb/hr; 57.5 ton/yr

Authority for Requirement: DNR Construction Permit 95-A-463-S2

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 23.3 lb/hr; 102 ton/yr

Authority for Requirement: DNR Construction Permit 95-A-463-S2

Operational Limits & Requirements

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

Operating Limits

A. The maximum production of this unit shall not exceed 474,530 tons of ammonia in any continuous twelve (12) month period.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

A. The owner or operator shall maintain a record of the ammonia production. The rolling twelve-month total shall be updated monthly.

Authority for Requirement: DNR Construction Permit 95-A-463-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 85

Stack Opening, (inches, dia.): 12

Exhaust Flow Rate (scfm): 50,600

Exhaust Temperature (°F): 200

Discharge Style: Vertical, Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-463-S2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-07

Associated Equipment

Associated Emission Unit ID Numbers: EU-07
Emissions Control Equipment ID Number: CE-07
Emissions Control Equipment Description: Selective Catalytic Reduction (SCR)
Continuous Emissions Monitors ID Numbers: ME-07

Emission Unit vented through this Emission Point: EU-07
Emission Unit Description: Nitric Acid Plant #1
Raw Material/Fuel: Nitric Acid
Rated Capacity: 20.83 tons of nitric acid produced per hour

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.

Emission Limits from Consent Decree

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 1.0 lb/ton of 100% nitric acid produced (3-hr rolling) ⁽¹⁾⁽³⁾
0.60 lb/ton of 100% nitric acid produced (365 day rolling) ⁽²⁾⁽³⁾

Authority for Requirement: DNR Construction Permit 95-A-470-S10

⁽¹⁾ Limit required per paragraph 9a of the Consent Decree. Compliance with the limit is based on a three (3) hour rolling average that is rolled hourly and does not apply during periods of startup, shutdown, or malfunction (SSM). Compliance shall be demonstrated through the use of a continuous emission monitoring system (CEMS).

⁽²⁾ Limit required per paragraph 9b of the Consent Decree. Compliance with the limit is based on a 365-day rolling average that is rolled daily and applies at all times including periods of SSM. Compliance shall be demonstrated through the use of CEMS.

⁽³⁾ The above-referenced NO_x limits were established pursuant to a negotiated Consent Decree with EPA and shall not be relaxed without the approval of EPA and the DNR.

Other Emission Limits

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 20.8 lb/hr ⁽¹⁾; 0.5 lb/ton ⁽²⁾

Authority for Requirement: DNR Construction Permit 95-A-470-S10
567 IAC 23.1(2)"bbbb"
40 CFR 60 Subpart Ga

- ⁽¹⁾ Emission limit requested by the company (plant number 97-01-030). The limit was based on the rolling three (3) hour limit of 1.0 lb/ton multiplied by the maximum rated capacity of Nitric Acid Plant #1 (20.83 tons/hr) and does not apply during periods of SSM.
- ⁽²⁾ Emission limit requested by the company (plant number 97-01-030). According to the company (plant number 97-01-030), Nitric Acid Plant #1 (EU-07) is subject to Subpart Ga (40 CFR §60.70a – 40 CFR §60.77a; *Standards of Performance for Nitric Acid Plants for Which Construction, Reconstruction, or Modification Commenced After October 14, 2011*) of the New Source Performance Standards (NSPS). Per 40 CFR §60.72a, the affected facility (EU-07) shall not discharge gases which contain NO_x, expressed as NO₂, in excess of 0.50 pounds (lbs) per ton of nitric acid produced. The standard is a thirty (30) day emission rate calculated based on thirty (30) consecutive operating days and the production expressed as 100% nitric acid. The standard applies at all times including periods of SSM. Compliance shall be demonstrated through the use of CEMS.

Operational Limits & Requirements

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

Operating Limits

- A. The amount of nitric acid produced by Nitric Acid Plant #1 (EU-07) shall not exceed 182,500 tons in any rolling twelve (12) month period.
- B. The owner or operator shall operate and maintain Nitric Acid Plant #1 (EU-07) and the SCR (CE-07) in a manner consistent with good air pollution control practice for minimizing emissions.

Authority for Requirement: DNR Construction Permit 95-A-470-S10

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. A log of the annual amount of nitric acid produced by Nitric Acid Plant #1 (EU-07) on a rolling twelve (12) month basis for each month of operation.
- B. A log of all maintenance and repairs to the SCR (CE-07).
- C. The owner or operator shall keep records for and results of the performance evaluations of the continuous emissions monitoring system (CEMS) in accordance with 40 CFR §60.76a(a).
- D. The owner or operator shall maintain records of the following information for each thirty (30) operating day period in accordance with 40 CFR §60.76a(b):
 1. Hours of operation.
 2. Production rate of nitric acid, expressed as 100% nitric acid.
 3. Thirty (30) day operating day average NO_x emissions rate values.

- E. The owner or operator shall maintain records of the following time periods in accordance with 40 CFR §60.76a(c):
 - 1. Times when the facility is not in compliance with the emissions standards.
 - 2. Times when the pollutant concentration exceeded full span of the NO_x monitoring equipment.
 - 3. Times when the volumetric flowrate exceeded the high value of the volumetric flow rate monitoring equipment.
- F. The owner or operator shall maintain records of the reasons for any periods of noncompliance and description of corrective actions taken in accordance with 40 CFR §60.76a(d).
- G. The owner or operator shall maintain records of any modifications to CEMS which could affect the ability of the CEMS to comply with applicable performance specifications in accordance with 40 CFR §60.76a(e).
- H. The owner or operator shall maintain records of the following information for each malfunction in accordance with 40 CFR §60.76a(f):
 - 1. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
 - 2. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

Authority for Requirement: DNR Construction Permit 95-A-470-S10

NSPS and NESHAP Applicability

This emission unit is subject to 40 CFR Part 60, Subpart Ga - *Standards of Performance for Nitric Acid Plants for which Construction, Reconstruction, or Modification Commenced After October 14, 2011.*

Authority for Requirement: 40 CFR Part 60 Subpart Ga
567 IAC 23.1(2)"bbbb"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 89

Stack Opening, (inches, dia.): 40

Exhaust Flow Rate (scfm): 45,000

Exhaust Temperature (°F): 500

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-470-S10

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall

submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Continuous Emissions Monitoring:

The following continuous emission monitoring requirements apply to this emission point and its associated emission unit(s) and control equipment:

A. The following monitoring systems are required:

- *NO_x:*

Per 40 CFR §60.73a, the owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and record the output of the system, for measuring nitrogen oxide (NO_x) emissions.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. This monitor shall also be used to demonstrate compliance with the non-NSPS emission standards in this permit.

- *Flowmeter:*

Per 40 CFR §60.73a, the owner or operator shall install, certify, operate, and maintain a continuous stack gas flow rate monitoring system meeting the requirements of 40 CFR 60, Appendix B, Performance Specification 6 (PS6) and 40 CFR 60, Appendix F, Procedure 1. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow of exhaust gases discharged to the atmosphere.

B. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits (CGA) and annual relative accuracy test audit (RATA). Annual RATAs and quarterly CGAs are required to be conducted on all CEMS and flowmeters required by this permit. The results shall be reported in units of the standards.

If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

C. The CEMS required by this permit shall be operated and the data recorded during all periods of operation including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, analyzer malfunctions, repairs, calibration checks, and required zero and span adjustments.

D. For the purposes of demonstrating compliance with the NSPS limit listed in the Emission Limitations section of this permit, the owner or operator shall comply with the following applicable requirements of 40 CFR §60.73a in addition to any applicable requirements not detailed in this permit:

(1) In order to demonstrate compliance with the NSPS emission limit in the Emission Limitations section of this permit, the owner or operator shall use the methodology in 40 CFR §60.75a(a) which is to calculate the thirty (30) operating day rolling arithmetic

average emissions rate in units of the applicable emissions standard (lb NO_x/ton 100% acid produced) at the end of each operating day using all of the quality assured hourly average CEMS data for the previous thirty (30) operating days.

- (2) The owner or operator shall calculate the thirty (30) operating day average emissions rate according to 40 CFR §60.75a(b) which uses the following equation:

$$E_{30} = \frac{\left[k \left(\frac{1}{n} \right) \sum_{i=1}^n C_i Q_i \right]}{P_i}$$

Where: E₃₀ = thirty (30) operating day average emissions rate of NO_x, lb NO_x/ton of 100% HNO₃;

C_i = concentration of NO_x for hour i, ppm_v;

Q_i = volumetric flow rate of effluent gas for hour i, where C_i and Q_i are on the same basis (either wet or dry), scf/hr;

P_i = total acid produced during production hour i, tons 100% HNO₃;

k = conversion factor, 1.194 x 10⁻⁷ for NO_x; and

n = number of operating hours in the thirty (30) operating day period, i.e., n is between 30 and 720.

E. Per the CEMS Plan for NO_x emissions from the Consent Decree [United States v. Terra Industries Inc., Civil Action No. 11-4038 (District Court for the Northern District of Iowa Western Division; April 19, 2011) (Consent Decree)], the owner or operator shall:

- (1) Conduct continuous monitoring during all operating periods as follows:

- (a) Once every minute, the NO_x analyzer shall measure the stack NO_x concentration (in ppm_{v,d}) and the stack flowmeter will measure the volumetric flow rate in dry standard cubic feet per minute (dscfm). NOTE: for the purposes of the calculations, as-is volumetric flowrate measurements will be assumed to be dry. However, the owner or operator may adjust for any moisture contained in the stack gas if Nitric Acid Plant #1 (EU-07) is equipped with a continuous moisture analyzer.
- (b) For every one (1) hour period [sixty (60) minute period commencing on the hour], the CEMS will reduce the sixty (60) one-minute measurements generated by each analyzer by taking the arithmetic average of the previous sixty (60) measurements during the one (1) hour period. This data will be used to calculate the three (3) hour average NO_x emission rate.

- (2) Backup monitoring procedure for long-term NO_x limit:

In the event the NO_x stack analyzer and/or stack flowmeter is/are not available or is/are out-of-control, the owner or operator shall implement the following backup monitoring procedure. The resulting data shall be used to calculate the 365-day average NO_x emission rate.

- (a) Other than as specified below for a CEMS outage or out-of-control period less than twenty-four (24) consecutive hours, the owner or operator shall comply with the following requirements to fill in data gaps in the array:
- Exit stack gas shall be sampled and analyzed for NO_x at least once every three (3) hours during all operating periods. Sampling shall be conducted by making physical measurements of the NO_x concentration in the gas stream to the main stack using alternative/non-CEMS methods (e.g., through the use of a portable

analyzer or non-certified NO_x stack analyzer). The reading obtained will be substituted for the 180 (or less) one (1) minute measurements that would otherwise be utilized if the CEMS were operating normally. Alternatively, the owner or operator may conduct the required sampling and analysis using a redundant certified NO_x analyzer.

- Stack volumetric flowrate will be estimated using engineering judgement.
 - (b) During required quality assurance or quality control activities (including calibration checks and required zero and span adjustments) of the CEMS and stack flowmeter, the owner or operator may utilize the previous calendar day average value to fill in the data gaps.
 - (c) If any one (1) or more than one (1) of the CEMS or stack flowmeter is/are not operating for a period of less than twenty-four (24) consecutive hours due to breakdowns, malfunctions, repairs, or out-of-control periods of the same, the owner or operator may utilize the previous calendar day average value recorded for each to fill in the data gaps.
- (3) The owner or operator shall record the following production data for each calendar day:
- A. The date,
 - B. The quantity of nitric acid produced for that day,
 - C. The average strength of the nitric acid produced for that day, and
 - D. The calculated 100% nitric acid produced for that day (in tons/day).
- (4) The owner or operator shall develop a conversion factor for the purpose of converting monitoring data in the terms of NO_x concentration into terms of lb/ton of 100% nitric acid produced per ppm_{vd} consistent with 40 CFR §60.73(b). The owner or operator shall reestablish the conversion factor consistent with 40 CFR §60.73(b) during each relative accuracy test audit (RATA) conducted in accordance with 40 CFR Part 60, Appendix F.
- (5) The owner or operator shall conduct the following emission calculations:

A. Rolling three (3) hour average:

For purposes of calculating the rolling three (3) hour average NO_x emission rate, the CEMS shall maintain an array of the three (3) most recent and contiguous one (1) hour period average measurements of stack NO_x concentration. Every hour, it will add the most recent one (1) hour period average measurement to the array and exclude the oldest one (1) hour period average measurement. Data generated using the backup monitoring procedure specified in paragraph E(2) above need not be included in this calculation.

The rolling three (3) hour average lb/ton NO_x emission rate (E_{3hravg}) shall be calculated every hour using the equation below:

$$E_{3hravg} = \frac{[K \sum_{i=1}^3 C_{NO_x i}]}{3}$$

Where: C_{NO_xI} = arithmetic average of sixty (60) one-minute measurements of stack NO_x concentration (in ppm_{vd}) in a one (1) hour period;

K = conversion factor determined during most recent NO_x performance test (lb/ton of 100% nitric acid produced per ppm);
and

E_{3hravg} = three (3) hour average lb of NO_x per ton of 100% nitric acid produced.

B. Rolling 365-day average:

For purposes of calculating the 365-day average NO_x emission rate each calendar day the owner or operator shall maintain an array of the mass emissions (lb/day) of NO_x (calculated using the below equation) and the 100% nitric acid produced for that day (tons/day) and the preceding 364 days. Each subsequent day the data from that day will be added to the array and the data from the oldest day will be excluded.

For the purposes of calculating the daily mass emission rate, the CEMS will maintain an array of each one (1) minute measurement of the NO_x concentration (ppm_{vd}) at the exit stack and each one (1) minute measurement of volumetric flow rate (dscfm) of the exit stack over each day. In the event that one or more of the CEMS and stack flowmeter is/are not available, the owner or operator shall use the backup monitoring procedure specified in Condition E.(2) above to fill in the data gaps.

The daily NO_x mass emissions shall be calculated following each calendar day using the following equation:

$$M_{NO_x Day} = 1.193 \times 10^{-7} \sum_{i=1}^n Q_{stack\ i} \times C_{NO_x\ i}$$

- Where: C_{NO_x I} = one (1) minute measurement of stack NO_x concentration (ppm_{vd}) at interval “i”;
- Q_{stack I} = one (1) minute measurement of stack volumetric flow rate (dscfm) at interval “i”;
- 1.193 x 10⁻⁷ = conversion factor in units of pounds per standard cubic foot (lb/scf) NO_x per ppm;
- M_{NO_xDay} = Mass emission of NO_x during a calendar day (lb); and
- n = number of minutes of operating period in a calendar day.

Following each calendar day, the NO_x emission rate as lb/ton averaged over a rolling 365-day period (E_{365-day Avg}) shall be calculated using the following equation:

$$E_{365\text{-day Avg}} = \frac{\sum_{d=1}^{365} M_{NO_x Day\ d}}{\sum_{d=1}^{365} P_d}$$

- Where: M_{NO_xDay d} = mass emissions of NO_x during calendar day “d” (lb);
- P_d = 100% nitric acid produced during a calendar day “d” (tons); and
- E_{365-day Avg} = 365-day rolling average lb of NO_x per ton of 100% nitric acid produced.

(6) Upon the completion of the calculations, the owner or operator shall round the final numbers as follows:

- A. E_{3hravg} : Rounded to the nearest tenth.
- B. E_{365-day Avg} : Rounded to the nearest hundredth.
- C. The numbers “5” – “9” shall be rounded up and the numbers “1” – “4” shall be

rounded down. Thus, “1.05” shall be rounded to “1.1”, and “1.04” shall be rounded to “1.0”.

- (7) If the owner or operator contends that any three (3) hour rolling average emission rate is in excess of the standard in the Emission Limits from Consent Decree section of this permit due to the inclusion of hours of SSM (startup, shutdown, or malfunction) emissions in the three (3) hour period, the owner or operator shall recalculate E_{3hravg} to exclude measurements recorded during the period(s) of claimed SSM. Nothing in the CEMS Plan for NO_x emissions (Condition E above) shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether Nitric Acid Plant #1 (EU-07) would have been in compliance with the three (3) hour rolling average limit if the appropriate performance test or compliance procedure had been performed.
- (8) For the purposes of the CEMS Plan for NO_x emissions (Condition E above), the NO_x stack analyzers and the stack flowmeter required shall meet the following specifications:

Analyzer	Parameter	Location	Range/Span Value
NO _x Stack Analyzers	NO _x (ppm _{vd})	Stack	Dual Range: <ul style="list-style-type: none"> ▪ Normal: 0 – 200 ppm NO_x ▪ SSM: 0 – 5,000 ppm NO_x
Stack Flowmeter	Volumetric Flowrate (scfm)	Stack	0 – 125% of the maximum expected volumetric flowrate

The NO_x stack analyzers shall meet all applicable requirements of 40 CFR §60.11 and 40 CFR §60.13. However, please note that the daily drift test requirement in 40 CFR §60.13(d) and the requirements of Appendix F apply only to the normal range of the NO_x stack analyzers. The SSM range of the NO_x stack analyzers shall be evaluated once each calendar quarter to verify accuracy.

- (9) In addition to this CEMS Plan for NO_x emissions (Condition E above), the owner or operator shall also comply with all of the requirements of the applicable NSPS relating to monitoring of Nitric Acid Plant #1 (EU-07) except that pursuant to 40 CFR §60.13(i), this CEMS Plan for NO_x emissions (Condition E above) will supersede the following provisions of the applicable NSPS:
 - A. The owner or operator shall utilize the span values specified in the table in Condition (8) above instead of the NSPS requirement that the NO_x stack analyzers have a span value of 500 ppm.
 - B. The owner or operator shall use calibration gases containing NO and/or NO₂ as appropriate to assure accuracy of the NO_x stack analyzers except where verified reference cells are used in accordance with Performance Specification 2 instead of the NSPS requirement that pollutant gas mixtures be nitrogen dioxide (NO₂) for Performance Specification 2 and for calibration checks.

Authority for Requirement – DNR Construction Permit 95-A-470-S10

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-08

Associated Equipment

Associated Emission Unit ID Numbers: EU-08

Emissions Control Equipment ID Number: CE-08, CE-08A, CE-08B

Emissions Control Equipment Description: CE-08: High Velocity Filter; CE-08A: Filter;
CE-08B: Mist Eliminator

Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-08

Emission Unit Description: Ammonium Nitrate Neutralizer and UAN Evaporator

Raw Material/Fuel: Nitric Acid and ammonia

Rated Capacity: 58.33 tons of ammonium nitrate produced per hour

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%⁽¹⁾

Authority for Requirement: DNR Construction Permit 95-A-467-S5
567 IAC 23.3(2) "d"

⁽¹⁾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).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 1.5 lb/hr

Authority for Requirement: DNR Construction Permit 95-A-467-S5

Pollutant: Particulate Matter (PM)

Emission Limit(s): 1.5 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 95-A-467-S5
567 IAC 23.3(2) "a"

Operational Limits & Requirements

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

Operating Limits

A. The production of ammonium nitrate from the Ammonium Nitrate Neutralizer and UAN

- Evaporator (EU-08) shall not exceed 511,000 tons in any monthly rolling, 12-month period.
- B. The UAN Evaporator blower amps shall not exceed 150 amps while the Ammonium Nitrate Neutralizer and UAN Evaporator are in operation.
 - C. The concentration of ammonium nitrate in the UAN Evaporator shall not exceed 40% by volume while the Ammonium Nitrate Neutralizer and UAN Evaporator are in operation.
 - D. The owner or operator shall maintain the control equipment according to manufacturer's specifications and maintenance schedule.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The permittee shall record each month the amount of ammonium nitrate produced from the Ammonium Nitrate Neutralizer and UAN Evaporator. The permittee shall also calculate and record 12-month rolling totals each month.
- B. The permittee shall properly operate and maintain equipment to continuously monitor the UAN Evaporator blower amps. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per written facility specific operation and maintenance plan.
- C. The permittee shall collect and record the UAN Evaporator blower amps, in amps, continuously. This requirement shall not apply on the days that the Ammonium Nitrate Neutralizer and UAN Evaporator are not in operation.
- D. The permittee shall collect and record the ammonium nitrate concentration in the UAN Evaporator, in percent by volume, at least once per day. This requirement shall not apply on the days that the Ammonium Nitrate Neutralizer and UAN Evaporator are not in operation.
- E. The permittee shall record and submit an excess emissions report to the department each time the UAN Evaporator blower amps and the UAN ammonium nitrate concentration exceed in the limits established in Section "Operating Limits" of this permit simultaneously.
- F. The owner or operator shall maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of the control equipment.

Authority for Requirement: DNR Construction Permit 95-A-467-S5

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 110
Stack Opening, (inches, dia.): 48
Exhaust Flow Rate (scfm): 15,000
Exhaust Temperature (°F): 170
Discharge Style: Vertical, Unobstructed
Authority for Requirement: DNR Construction Permit 95-A-467-S5

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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)

High Velocity Filter/Mist Eliminator Agency Operation and Maintenance Plan

Facility:	CF Industries Nitrogen, LLC - Port Neal Nitrogen Complex
EIQ Number	92-4988
Emission Point:	EP-08
Emission Unit:	EU-08 (Ammonium Nitrate Neutralizer and UAN Evaporator)
Control Equipment:	CE-08 (Filter, High Velocity) CE-08A (Filter) CE-08B (Mist Eliminator)

Monitoring Guidelines

The facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time. An excursion does not necessarily indicate a violation of an applicable requirement. If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the exceedance to the department and conduct source testing within 90 days of the exceedance to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

Monitoring, Operations, and Corrective Actions

General

- Control Equipment CE-08 (High Velocity Filter), CE-08A (Filter), and CE-08B (Mist Eliminator) operate in conjunction with each other and are monitored as a package.
- Periodic monitoring will be accomplished by observation of the pressure drop across the mist eliminator and the filter elements in 453-L evaporator/wet scrubber.
 - The pressure drop values will be logged every twelve-hour shift while in operation.
 - A low value could indicate loss of filter media or displacement of elements.
 - A high value could indicate pluggage, which could lead to excessive velocities.
- There are no specific startup or shutdown activities for the control equipment. Normal operating range at typical rates would be 2 to 12 inches H₂O.
 - If the indicator is above this range, the filters would be flushed with condensate.
 - If the indicator remains above range or if it is below range, the instrumentation would be checked to verify its output.
 - If the indicator remains out of range, the facility would report the exceedance of indicator ranges to the department.
- Continuous monitoring of the blower amps will be performed.
 - Amps level shall not exceed 150.
 - If levels do exceed 150 Amps, control board alarms will notify the operator of the high level. The operator will immediately adjust the levels to below 150 amps.

- Periodic monitoring of the evaporator concentration will be conducted.
 - Evaporator concentration will be measured and recorded on a minimum of daily basis.
 - If levels do exceed 40%, the control board operator will make adjustment to the plant operating parameters to bring the level below 40%.
- The operation of the unit is critical to the operation of the entire facility.
- If the blower amps exceed 150 and the evaporator concentrations are greater than 40% and the facility is not able to adjust the plant parameters below the agreed levels, source testing will be performed with 60 days of demonstrate compliance with the applicable requirements.
- If compliance is demonstrated, new indicator ranges will be established and incorporated into the operating permit.
- If testing demonstrates non-compliance, a schedule will be submitted within 60 days proposing a schedule of action to bring the source into and demonstrate compliance.

Maintenance

- Because the unit is normally in continuous operation, maintenance affecting the Control Equipment is typically done at plant turnarounds, which occur on a two to three year cycle.
 - Filters are then inspected for integrity of the medium and positioning and retention hardware and gaskets are checked.
 - Repair and/or replacement are done as needed.
 - A spare set of filter elements is kept on hand.
 - Replacement cycle for the filters is expected to be completed during facility turnarounds.
 - Useful life of the mist eliminator is expected to be essentially permanent. It will be inspected and repaired as necessary at the same time that filter maintenance is performed.

Mechanical Integrity Program

The owner/operator shall adhere to the current Mechanical Integrity (M.I.) Program. The purpose of the M.I. Program is to assure the continued mechanical reliability of the process equipment.

The categories of equipment included in this program are listed below:

- Pressure Vessels and Tanks
- Piping Systems and Valves
- Relief and Vent Valves
- Emergency Shutdown Systems
- Pumps, Compressors, and Turbines
- Process Controls

Equipment which is used to monitor key process parameters is serviced as necessary. A UAN plant outage is required to perform an internal inspection of the scrubbers. Inspections of the 1st neutralizer internals (including, but not limited to, the vortex breaker) shall be completed during facility turnarounds. Inspection frequency is determined by reliability and engineering personnel. Instrumentation will be maintained and operated according to generally accepted engineering practices and historical experiences. An adequate inventory of spare parts shall be kept.

Documentation of testing and inspection records of the critical equipment is maintained as part of the M.I. Program. All employees involved in maintaining the on-going integrity of the process equipment shall be trained in accordance with the facility's M.I. Program.

Record Keeping and Reporting

- All records will be retained for at least five (5) years and will be available for review upon request by any authorized regulatory agency.
- Records to be retained for and/or submitted to regulatory agencies include:
 - Operators daily logs
 - Maintenance records
 - Spare parts inventory

Quality Control

(The following quality control measures will be implemented in association with the operation of the Control Equipment.)

- All instruments and equipment will be calibrated, operated, and maintained according to equipment manufacture's recommendations.
- This Operation and Maintenance Plan will be available for review at the facility.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-20

Associated Equipment

Associated Emission Unit ID Numbers: EU-20, EU-20A

EU	Emission Unit Description	Raw Material	Rated Capacity
EU-20	Pre-shift	Ammonia	54.17 tons/hr
EU-20A	Pre-Methanator	Ammonia	54.17 tons/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: Carbon Monoxide (CO)

Emission Limit(s): 1,736.5 tons/yr

Authority for Requirement: DNR Construction Permit 95-A-462-S1

Operational Limits & Requirements

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

Operating Limits

- A. The emission of Carbon Monoxide (CO) shall not exceed a maximum of 1,736.5 tons in any continuous twelve-month period.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. A copy of the emission profiles shall be kept on site for review. A record of the usage of this vent shall be kept as well. This record shall denote the process (startup, shutdown, etc.) and the duration of the usage. From the profile and other records, a total amount of CO emitted over the previous twelve-month period shall be calculated and recorded.

Authority for Requirement: DNR Construction Permit 95-A-462-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 175
Stack Opening, (inches, dia.): 18
Exhaust Flow Rate (scfm): 109,000
Exhaust Temperature (°F): 680
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 95-A-462-S1

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-21

Associated Equipment

Associated Emission Unit ID Numbers: EU-21

Emission Unit vented through this Emission Point: EU-21
Emission Unit Description: Ammonia Synthesis Start-Up Heater
Raw Material/Fuel: Natural Gas
Rated Capacity: 19.50 MMBtu/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(s): 0%
Authority for Requirement: DNR Construction Permit 95-A-466-S1
567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.8 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(2) "b"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 500 ppmv
Authority for Requirement: 567 IAC 23.3(3) "e"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 3.0 lb/hr; 0.45 ton/yr
Authority for Requirement: DNR Construction Permit 95-A-466-S1

Operational Limits & Requirements

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

Operating Limits

A. The hours of operation of this unit shall not exceed 300 hours in any continuous twelve-month period.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. A record of the hours of operation of this unit shall be kept. The total for the previous twelve-month period shall be recorded at the end of each month.

Authority for Requirement: DNR Construction Permit 95-A-466-S1

NSPS and NESHAP Applicability

This equipment is subject to the following federal regulation: National Emission Standards for Hazardous Air Pollutants for Major Sources Subpart DDDDD: Industrial, Commercial, and Institutional Boilers and Process Heaters and Subpart A – General Provisions.

Authority for Requirement: 40 CFR 63 Subpart DDDDD

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 72.50
- Stack Opening, (inches, dia.): 97
- Exhaust Flow Rate (scfm): 3,942
- Exhaust Temperature (°F): 1,500
- Discharge Style: Vertical Unobstructed
- Authority for Requirement: DNR Construction Permit 95-A-466-S1

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-23

Associated Equipment

Associated Emission Unit ID Numbers: EU-23

Emissions Control Equipment ID Number: CE-23, CE-23A, CE-23B

Emissions Control Equipment Description: CE-23: Filter; CE-23A: Filter, High Velocity; CE-23B: Mist Eliminator

Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-23

Emission Unit Description: Wastewater Evaporator

Raw Material/Fuel: Waste Water

Rated Capacity: 55,667.00 lb/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(s): 40% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 95-A-468-S3
567 IAC 23.3(2) "d"

⁽¹⁾An exceedance 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 exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 2.6 lb/hr

Authority for Requirement: DNR Construction Permit 95-A-468-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 95-A-468-S3
567 IAC 2.3(2) "a"

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

See Plant-Wide Conditions.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 82.8
Stack Opening, (inches, dia.): 48
Exhaust Flow Rate (scfm): 35,000
Exhaust Temperature (°F): 170
Discharge Style: Vertical, Unobstructed
Authority for Requirement: DNR Construction Permit 95-A-468-S3

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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)

High Velocity Filter/Mist Eliminator Agency Operation and Maintenance Plan

Facility:	CF Industries Nitrogen, LLC - Port Neal Nitrogen Complex
EQ Number	92-4988
Emission Unit:	EU-23 (Wastewater Evaporator)
Emission Point:	EP-23
Control Equipment:	CE-23A (High Velocity Filter) and CE-23B (Mist Eliminator)

Monitoring Guidelines

The facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time. An excursion does not necessarily indicate a violation of an applicable requirement. If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the exceedance to the department and conduct source testing within 90 days of the exceedance to demonstrate compliance with applicable requirements. If the test demonstrate compliance with emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

Monitoring, Operations, and Corrective Actions

General

- Control Equipment CE-23A (High Velocity Filter) and CE-23B (Mist Eliminator) operate in conjunction with each other and are monitored as a package.
- Periodic monitoring will be accomplished by observation of the pressure drop across the mist eliminator and the filter elements in EU-23 (Wastewater Evaporator).
 - The pressure drop values will be logged every twelve hour shift while in operation.
 - A low value could indicate loss of filter media or displacement of elements.
 - A high value could indicate pluggage, which could lead to excessive velocities.
- There are no specific startup or shutdown activities for the control equipment. Normal operating range at typical rates would be 2 to 10 inches H₂O.
 - If the indicator is above this range, the filters would be flushed with condensate.
 - If the indicator remains above range or if it is below range, the instrumentation would be checked to verify its output.
 - If the indicator remains out of range, the facility would report the exceedance of indicator ranges to the department.
- The operation of the unit is not critical to the operation of the entire facility.
 - Accordingly, if the indicator remains out of range, the unit would be shut down for inspection and repairs.
 - If the indicator remains out of range, the facility would report the exceedance of the indicator range to the department. Source testing will be conducted within 90 days of the exceedance to demonstrate compliance with the applicable requirements.

- If compliance is demonstrated, new indicator ranges will be established and incorporated into the operation permit.
- *If testing demonstrates non-compliance, a schedule will be submitted within 60 days proposing a schedule of action to bring the source into and demonstrate compliance.*

Maintenance

- Because this unit is not vital to the operation of the facility, the filter elements can be changed out at any time during the course of a two or three year cycle.
 - Filters are inspected for integrity of the medium and positioning and retention hardware and gaskets are checked.
 - Repair and/or replacement are done as needed.
 - A spare set of filter elements is kept on hand.
 - Replacement cycle for the filters is expected to be approximately every two to three years.
 - Useful life of the mist eliminator is expected to be essentially permanent. It will be inspected and repaired as necessary at the same time that filter maintenance is performed.

Record Keeping and Reporting

- All records will be retained for at least five (5) years and will be available for review upon request by any authorized regulatory agency.
- Records to be retained for and/or submitted to regulatory agencies include:
 - Operators daily logs
 - Maintenance records
 - Spare parts inventory

Quality Control

(The following quality control measures will be implemented in association with the operation of the Control Equipment.)

- All instruments and equipment will be calibrated, operated, and maintained according to equipment manufacture's recommendations.
- This Operation and Maintenance Plan will be available for review at the facility.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-24

Associated Equipment

Associated Emission Unit ID Numbers: EU-24, EU-24A

EU	Emission Unit Description	Raw Material	Rated Capacity
EU-24	Ammonia Flare Pilot Burner	Natural Gas	1.50 MMBtu/hr
EU-24 A	Ammonia Flare	Ammonia	1.15 tons/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(s): 0%

Authority for Requirement: DNR Construction Permit 95-A-469-S4
567 IAC 23.3(2) "d"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 4.0 ton/yr

Authority for Requirement: DNR Construction Permit 95-A-469-S4

Operational Limits & Requirements

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

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. A record of any time that this unit is used to combust ammonia and the amount of ammonia that is combusted shall be maintained monthly.

Authority for Requirement: DNR Construction Permit 95-A-469-S4

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 50
- Stack Opening, (inches, dia.): 6.5
- Exhaust Flow Rate (scfm): 440
- Exhaust Temperature (8F): 2,000
- Discharge Style: Vertical, Unobstructed
- Authority for Requirement: DNR Construction Permit 95-A-469-S4

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-25

Associated Equipment

Associated Emission Unit ID Numbers: EU-25
Emissions Control Equipment ID Number: CE-25
Emissions Control Equipment Description: Selective Catalytic Reduction (SCR)
Continuous Emissions Monitors ID Numbers: ME-25

Emission Unit vented through this Emission Point: EU-25
Emission Unit Description: Nitric Acid Plant #2
Raw Material/Fuel: Nitric Acid
Rated Capacity: 20.83 tons of nitric acid produced per hour

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.

Emission Limits from Consent Decree

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 1.0 lb/ton of 100% nitric acid produced (3-hr rolling) ⁽¹⁾⁽³⁾
0.60 lb/ton of 100% nitric acid produced (365 day rolling) ⁽²⁾⁽³⁾
Authority for Requirement: DNR Construction Permit 95-A-910-S5

⁽¹⁾ Limit required per paragraph 10a of the Consent Decree. Compliance with the limit is based on a three (3) hour rolling average that is rolled hourly and does not apply during periods of startup, shutdown, or malfunction (SSM).

⁽²⁾ Limit required per paragraph 10b of the Consent Decree. Compliance with the limit is based on a 365-day rolling average that is rolled daily and applies at all times including periods of SSM.

⁽³⁾ The above-referenced NO_x limits were established pursuant to a negotiated Consent Decree with EPA and shall not be relaxed without the approval of EPA and the DNR.

Other Emission Limits

Pollutant: Opacity
Emission Limit(s): 10% ⁽¹⁾
Authority for Requirement: DNR Construction Permit 95-A-810-S5
567 IAC 23.1(2)"d"
40 CFR Part 60 Subpart G

⁽¹⁾ Opacity limit shall apply at all times except during periods of startup, shutdown, and malfunction as provided in 40 CFR 60.11(c).

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 62.5 lb/hr; 221.7 tons/yr; 3.0 lb/ton ⁽²⁾
Authority for Requirement: DNR Construction Permit 95-A-810-S5
567 IAC 23.1(2)"d"
40 CFR Part 60 Subpart G

- (2) 3.0 lb/ton of acid produced, the production being expressed as 100 percent nitric acid, with compliance based on a 3-hour average (arithmetic average of three contiguous 1-hour periods). Limit applies at all times except during periods of startup, shutdown, and malfunction as provided in 40 CFR 60.8(c).

Operational Limits & Requirements

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

Operating Limits

- A. The production rate of nitric acid from Nitric Acid Plant # 2 shall not exceed 182,500 tons of nitric acid in any continuous twelve (12) month period, rolled monthly.
- B. The Selective Catalytic Reduction unit shall be operated at all times that nitric acid production is occurring.
- C. The owner or operator shall at all times, to the extent practicable, maintain and operate the Nitric Acid Plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, consistent with 40 CFR §60.11(d).
- D. On or before March 1, 2012, the owner or operator shall prepare and submit to DNR and EPA Region 7 an Operation and Maintenance Plan (“O&M Plan”) for Nitric Acid Plant #2 (EU-25) and shall implement the O&M Plan on or before March 31, 2012. The O&M Plan shall describe the operating and maintenance procedures necessary to:
 1. Minimize the frequency of Nitric Acid Plant #2 Shutdowns; and
 2. At all times, including periods of Startup, Shutdown, and Malfunction, maintain and operate Nitric Acid Plant #2, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The owner or operator shall review and update (if necessary) the O&M Plan at least once every three (3) years.

Authority for Requirement: DNR Construction Permit 95-A-810-S5

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner operator shall maintain a record of the daily production rate and the hours of operation shall be maintained. A record of the total amount of nitric acid produced from Nitric Acid Plant #2 over the previous twelve (12) months shall be recorded at the end of each month.
- B. The owner or operator shall record the daily production rate and hours of operation.

Authority for Requirement: DNR Construction Permit 95-A-810-S5

Compliance with the NO_x limit of 3.0 lb NO_x per ton of pure nitric acid produced shall be demonstrated by the average nitrogen oxides emissions (arithmetic average of three contiguous 1-hour periods rolled hourly) as measured by a continuous monitoring system.

Authority for Requirement: 40 CFR 60 Subpart G
567 IAC 23.1(2)"d"

C. Compliance with the NO_x limit of 62.5 lb/hr shall be demonstrated on a daily basis by multiplying the average pounds of NO_x per ton of production by the tons of production for the day divided by the hours of operation for the day.

Authority for Requirement: 567 IAC 22.108 (3)

NSPS and NESHAP Applicability

This emission unit is subject to New Source Performance Standards (NSPS) Subpart G: Standards of Performance for Nitric Acid Plants, and also subject to Subpart A: General Provisions

Authority for Requirements: 40 CFR 60 Subpart G
567 IAC 23.1(2)"d"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 120

Stack Opening, (inches, dia.): 40

Exhaust Flow Rate (scfm): 35,000

Exhaust Temperature (°F): 330

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-810-S5

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Opacity Monitoring

Weekly opacity monitoring is not required when the NO_x concentration in the exhaust is below 200 ppmv on a three-hour rolling average (rolled hourly) basis as measured by the NO_x CEMS system.

If the NO_x concentration is equal to or greater than 200 ppmv and visible emissions are present at any time other than start-up, shutdown or cleaning of control equipment, a Method 9 observation will be required.

If an opacity >10% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from observation of the violation.

If weather conditions prevent the observer from conducting an observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Maintain a written record of the NO_x emission concentration data, the opacity observation and any action resulting from the observation for a minimum of five years.

Authority for Requirement: 567 IAC 22.108(14)

Continuous Emissions Monitoring:

Pollutant – Nitrogen Oxides (NO_x)

Operational Specifications – as specified in 40 CFR 60 Subpart G

Date of Initial System Calibration and Quality Assurance – October 31, 2014

Ongoing System Calibration/Quality Assurance – as specified in 40 CFR 60 Subpart G

Reporting & Record keeping – as specified in 40 CFR 60 Subpart G. Submit all reports and petitions required by 40 CFR 60 Subpart G to the DNR in order to demonstrate compliance with the NO_x limit.

Authority for Requirement: 567 IAC 23.1(2) "d"
40 CFR 60 Subpart G

- A. By No later than March 31, 2012, the owner or operator shall install, certify, and calibrate a NO_x Continuous Emissions Monitoring System (CEMS) associated with Port Neal Nitric Acid Plant #2. The CEMS shall include a NO_x analyzer capable of measuring NO_x concentration and a stack flowmeter that senses volumetric flow rate.
- B. Except as may be specified in accordance with the applicable CEMS Plan in Attachment C of the Federal Consent Decree, the NO_x stack analyzer shall comply with 40 CFR Part 60, Appendix B, Performance Specification 2 and the quality assurance/quality control requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, and the stack flowmeter shall comply with 40 CFR Part 60, Appendix B, Performance Specification 6. NO_x emission testing as required under Condition 12 of this permit may serve as the CEMS relative accuracy test required under Performance Specification 2 in 40 CFR Part 60, Appendix B.
- C. On and after March 31, 2012, and except during periods of CEMS breakdowns, analyzer malfunctions, repairs, and required quality assurance or quality control activities (including calibration checks and required zero and span adjustments), the CEMS shall be in continuous operation during all Operating Periods (as that term is defined in this permit).
- D. The owner or operator shall take all necessary steps to minimize CEMS breakdowns and

minimize CEMS downtime including, but not limited to, operating and maintaining the CEMS in accordance with best practices and maintaining an on-site inventory of spare parts or other supplies necessary to make rapid repairs to the equipment.

- E. The owner or operator shall comply with the applicable CEMS Plan in Attachment C of the Federal Consent Decree.
- F. This monitor shall also be used to demonstrate compliance with the non-NSPS emission standards in this permit.

Authority for Requirement: DNR Construction Permit 95-A-810-S5

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-27

Associated Equipment

Associated Emission Unit ID Numbers: EU-27, EU-27A

Emission Unit Description	Emission Unit Description	Raw Material/Fuel	Rated Capacity	DNR Construction Permit
EU-27	Ammonia Flare Pilots (2)	Natural Gas	0.10 MMBtu/hr (combined)	13-A-033-S2
EU-27A	Ammonia Flare	Ammonia, Process Gas	32,160 lb/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(s): No Visible Emissions⁽¹⁾

Authority for Requirement: DNR Construction Permit 13-A-033-S2
567 IAC 23.3(2)"d"

⁽¹⁾ EU-27 & 27A shall be designed for and operated with "no visible emissions (No VE)" except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 13-A-033-S2
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permit 13-A-033-S2
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 8.1 ton/yr

Authority for Requirement: DNR Construction Permit 13-A-033-S2

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

Operating Limits

- A. The Ammonia Flare (EU-27 & EU-27A) shall be fueled with natural gas and/or ammonia plant purge gas as fuel to maintain the pilot, maintain pressure to the flare during idling, and as enrichment fuel if needed.
- B. The Ammonia Flare (EU-27 & EU-27A) is authorized to flare ammonia and ammonia plant purge gas.
- C. The Ammonia Flare (EU-27 & EU-27A) shall:
 - (1) Be designed for and operated with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
 - (2) Be operated with a flame present at all times.
 - (3) Be designed to ensure smokeless operation.

Reporting and Recordkeeping

- A. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
- B. The owner or operator shall record and maintain the following monthly records:
 - (1) The number of hours that the flare was in operation,
 - (2) The emissions from the flare for each pollutant for that month,
 - (3) The rolling twelve (12) month total of the number of hours that the flare was in operation, and
 - (4) The rolling twelve (12) month total emissions for each pollutant for each month of operation.
- C. The owner or operator shall maintain records of any maintenance work performed on the Ammonia Flare (EU-27 & EU-27A).
- D. The owner or operator shall properly maintain equipment used to continuously monitor the pilot flame.
- E. The owner or operator shall record any periods of time during which there was no pilot flame.

Authority for Requirement: DNR Construction Permit 13-A-033-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 70
Stack Opening, (inches, dia.): 24
Exhaust Flow Rate (scfm): 150 (just pilot burner), 15,000 (flare events)
Exhaust Temperature (°F): 1,830 (just pilot burner), 1,830 (flare events)
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 13-A-033-S2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-29

Associated Equipment

Associated Emission Unit ID Numbers: EU-29

Emission Unit vented through this Emission Point: EU-29
Emission Unit Description: Haul Road Fugitive Emissions
Raw Material/Fuel: Dust
Rated Capacity: 3.45 VMT/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.

Emission limits are not required at this time.

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: EP-29A

Associated Equipment

Associated Emission Unit ID Numbers: EU-29A
Emissions Control Equipment ID Number: CE-29A
Emissions Control Equipment Description: Water Flushing and Sweeping

Emission Unit vented through this Emission Point: EU-29A
Emission Unit Description: North Plant Main Road
Raw Material/Fuel: Dust
Rated Capacity: 680 VMT/day; 58,948 VMT/yr

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): No Visible Emissions⁽¹⁾
Authority for Requirement: DNR Construction Permit 13-A-223-P3
567 IAC 23.3(2)"d"

⁽¹⁾ No visible emissions shall be observed beyond the lot line of the property.

Pollutant: PM_{2.5}
Emission Limit(s): 0.0365 lb/hr
Authority for Requirement: DNR Construction Permit 13-A-223-P3

Pollutant: PM₁₀
Emission Limit(s): 0.149 lb/hr
Authority for Requirement: DNR Construction Permit 13-A-223-P3

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The haul road surface silt loading shall not exceed 0.4 g/m².
- B. All spills on the haul road surface shall be cleaned up as soon as possible after the spill occurs.
- C. Fugitive emissions of paved haul roads shall be controlled by either completing daily water flushing followed by vacuum sweeping or by obtaining a vacuum sweeper that is certified to control at least 80% of PM emissions and completing daily sweeping. Sweeping and watering are not required in the following situations:
 - (1) Sweeping and watering need not occur on any day that the haul road is not in use.
 - (2) Sweeping and watering need not occur when a rain gauge located at the facility

indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hour time period.

(3) Sweeping and watering will not be required on calendar days where the daily high temperature is below 35 degrees F.

(4) If a facility has applied salt or sand for worker or driver safety the facility is not required to sweep or wash until the road has returned to driving conditions that no longer require the use of salt or sand.

D. Maintain a record of all silt loading tests conducted.

E. Maintain a record of the frequency of cleaning performed on the haul road.

F. Maintain a written record of any deviations from Condition C due to either suspended use of the haul road or weather conditions.

G. Maintain a record of the type of cleaning (i.e. vacuum sweeping, washing, etc.) performed on the haul road for each cleaning event.

Monitoring Requirements

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

Testing:

Pollutant – Silt Loading

Stack Test to be Completed – Semi-Annually

Test Method – Silt Test ⁽¹⁾

Authority for Requirement: DNR Construction Permit: 13-A-223-P3
AP-42, Appendix C.1 and Appendix C.2

⁽¹⁾ Performance testing on the haul road surface silt loading shall be completed on a semi-annual basis. For each performance test, silt loading sampling shall be done for at least three (3) different locations and immediately prior to the next cleaning cycle. After four (4) successful tests, the facility may petition the Department to relieve the testing requirement.

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-29B

Associated Equipment

Associated Emission Unit ID Numbers: EU-29B

Emissions Control Equipment ID Number: CE-29B

Emissions Control Equipment Description: Water Flushing and Sweeping

Emission Unit vented through this Emission Point: EU-29B

Emission Unit Description: Connector Road

Raw Material/Fuel: Dust

Rated Capacity: 4.52 VMT/day; 1,650 VMT/yr

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): No Visible Emissions⁽¹⁾

Authority for Requirement: DNR Construction Permit 15-A-580-P1
567 IAC 23.3(2)"d"

⁽¹⁾ No visible emissions shall be observed beyond the lot line of the property.

Pollutant: PM_{2.5}

Emission Limit(s): 0.00024 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-580-P1

Pollutant: PM₁₀

Emission Limit(s): 0.001 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-580-P1

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The haul road surface silt loading shall not exceed 0.4 g/m².
- B. All spills on the haul road surface shall be cleaned up as soon as possible after the spill occurs.
- C. Fugitive emissions of paved haul roads shall be controlled by either completing daily water flushing followed by vacuum sweeping or by obtaining a vacuum sweeper that is certified to control at least 80% of PM emissions and completing daily sweeping. Sweeping and watering are not required in the following situations:
 - (1) Sweeping and watering need not occur on any day that the haul road is not in use.
 - (2) Sweeping and watering need not occur when a rain gauge located at the facility indicates that at least 0.2 inches of precipitation (water equivalent) has occurred

within the preceding 24-hour time period.

(3) Sweeping and watering will not be required on calendar days where the daily high temperature is below 35 degrees F.

(4) If a facility has applied salt or sand for worker or driver safety the facility is not required to sweep or wash until the road has returned to driving conditions that no longer require the use of salt or sand.

D. Maintain a record of all silt loading tests conducted.

E. Maintain a record of the frequency of cleaning performed on the haul road.

F. Maintain a written record of any deviations from Condition C due to either suspended use of the haul road or weather conditions.

G. Maintain a record of the type of cleaning (i.e. vacuum sweeping, washing, etc.) performed on the haul road for each cleaning event.

Authority for Requirement - DNR Construction Permit: 15-A-580-P1

Monitoring Requirements

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

Testing:

Pollutant – Silt Loading

Stack Test to be Completed – Semi-Annually

Test Method – Silt Test ⁽¹⁾

Authority for Requirement: DNR Construction Permit: 15-A-580-P1
AP-42, Appendix C.1 and Appendix C.2

⁽¹⁾ Performance testing on the haul road surface silt loading shall be completed on a semi-annual basis. For each performance test, silt loading sampling shall be done for at least three (3) different locations and immediately prior to the next cleaning cycle. After four (4) successful tests, the facility may petition the Department to relieve the testing requirement.

The owner of this equipment or the owner’s authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-29C

Associated Equipment

Associated Emission Unit ID Numbers: EU-29C

Emissions Control Equipment ID Number: CE-29C

Emissions Control Equipment Description: Chemical Dust Suppression: Unpaved Road
Water Flushing and Sweeping: Paved Road

Emission Unit vented through this Emission Point: EU-29C

Emission Unit Description: Inner Plant Road

Raw Material/Fuel: Dust

Rated Capacity: 4.20 VMT/day; 1,533 VMT/yr

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): No Visible Emissions⁽¹⁾

Authority for Requirement: DNR Construction Permit 15-A-581-P3
567 IAC 23.3(2)"d"

⁽¹⁾ No visible emissions shall be observed beyond the lot line of the property.

Pollutant: PM_{2.5}

Emission Limit(s): 0.0085 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-581-P3

Pollutant: PM₁₀

Emission Limit(s): 0.085 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-581-P3

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

Unpaved Portions of Inner Plant Road EU-29C

- A. The Inner Plant Road (EU-29c) road surface silt content shall not exceed 1.6 %. The owner or operator shall maintain a record of all silt content testing conducted on the Inner Plant Road (EU-29c).
- B. All spills on the Inner Plant Road (EU-29c) shall be cleaned up as soon as possible after the spill occurs.
- C. Fugitive emissions of unpaved haul roads shall be controlled by applying a chemical dust suppressant. A control efficiency of 95% shall be maintained on all unpaved haul roads.

The owner or operator may elect to use any chemical dust suppressant that is capable of achieving the 95% control efficiency. In the event that the manufacturer or distributor of a chemical dust suppressant recommends different amounts of chemical dust suppressant or the owner or operator chooses to use a different chemical dust suppressant, the owner or operator shall notify the Department of the change in application rates and/or chemical dust suppressant and the manufacturer's/distributor's recommendations. The owner or operator shall apply the dust suppressant as recommended by the manufacturer to achieve the 95% control efficiency. The application of the chemical dust suppressant is not required in the following situations:

- (1) Application of dust suppressant need not occur on any day that the haul road is not in use.
 - (2) Application of dust suppressant need not occur when a rain gauge located at the facility indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hour time period.
 - (3) Application of chemical dust suppressant is not required if the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35 degrees F, or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions.
- D. The owner or operator shall collect and maintain records of the applications of chemical dust suppressant. These records shall include:
- (1) The dates of each application,
 - (2) The chemical dust suppressant used,
 - (3) The application intensity (gal/sq yd)
 - (4) Dilution ratio,
 - (5) The operator's initials,
 - (6) Documentation of road and weather conditions (if necessary), and
 - (7) An explanation of why chemical dust suppressant was not applied as planned (if necessary).

Paved Portions of Inner Plant Road EU29c:

- E. The haul road surface silt loading shall not exceed 0.4 g/m².
- F. All spills on the haul road surface shall be cleaned up as soon as possible after the spill occurs.
- G. Fugitive emissions of paved haul roads shall be controlled by either completing daily water flushing followed by vacuum sweeping or by obtaining a vacuum sweeper that is certified to control at least 80% of PM emissions and completing daily sweeping. Sweeping and watering are not required in the following situations:
 - (1) Sweeping and watering need not occur on any day that the haul road is not in use.
 - (2) Sweeping and watering need not occur when a rain gauge located at the facility indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hour time period.
 - (3) Sweeping and watering will not be required on calendar days where the daily high temperature is below 35 degrees F.
 - (4) If a facility has applied salt or sand for worker or driver safety the facility is not required to sweep or wash until the road has returned to driving conditions that no longer require the use of salt or sand.

- H. Maintain a record of all silt loading tests conducted.
- I. Maintain a record of the frequency of cleaning performed on the haul road.
- J. Maintain a written record of any deviations from Condition G due to either suspended use of the haul road or weather conditions.
- K. Maintain a record of the type of cleaning (i.e. vacuum sweeping, washing, etc.) performed on the haul road for each cleaning event.

Authority for Requirement: DNR Construction Permit: 15-A-581-P3

Monitoring Requirements

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

Testing:

Pollutant – Silt Content

Stack Test to be Completed – Semi-Annually

Test Method – Silt Test ⁽¹⁾

Authority for Requirement: DNR Construction Permit: 15-A-581-P3

AP-42, Appendix C.1 and Appendix C.2

- ⁽¹⁾ Performance testing on the unpaved haul road surface silt content shall be completed on a semi-annual basis. For each performance test, silt content sampling shall be done for at least three (3) different locations and immediately prior to the next dust suppressant application. After four (4) successful tests, the facility may petition the Department to relieve the testing requirement.

Pollutant – Silt Loading

Stack Test to be Completed – Semi-Annually

Test Method – Silt Test ⁽²⁾

Authority for Requirement - DNR Construction Permit: 15-A-581-P3

AP-42, Appendix C.1 and Appendix C.2

- ⁽²⁾ Performance testing on the paved haul road surface silt loading shall be completed on a semi-annual basis. For each performance test, silt loading sampling shall be done for at least three (3) different locations and immediately prior to the next cleaning cycle. After four (4) successful tests, the facility may petition the Department to relieve the testing requirement.

The owner of this equipment or the owner’s authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-200

Associated Equipment

Associated Emission Unit ID Numbers: EU-200
Emissions Control Equipment ID Number: CE-200
Emissions Control Equipment Description: Selective Catalytic Reduction (SCR)
Continuous Emissions Monitors ID Numbers: ME-200a, ME-200b

Emission Unit vented through this Emission Point: EU-200
Emission Unit Description: Primary Reformer
Raw Material/Fuel: Natural Gas, Process Gases
Rated Capacity: 1,275 MMBTU/hr, 133.33 tons of ammonia/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(s): No Visible Emissions
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: PM_{2.5}
Emission Limit(s): 3.06 lb/hr, 13.4 tons/yr, 0.0024 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: PM₁₀
Emission Limit(s): 3.06 lb/hr, 13.4 tons/yr, 0.0024 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.6 lb/MMBtu, 13.4 tons/yr, 0.0024 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 500 ppm
Authority for Requirement: DNR Construction Permit 13-A-207-P4
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 200 lb/hr, 104.40 tons/yr⁽¹⁾
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: Volatile Organic Compounds (VOC's)
Emission Limit(s): 7.82 tons/yr, 0.0014 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 20.61 lb/hr, 90.3 tons/yr, 0.0194 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: Carbon Dioxide (CO₂)
Emission Limit(s): 127 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: Methane (CH₄)
Emission Limit(s): 0.0023 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: Nitrous Oxide (N₂O)
Emission Limit(s): 0.00063 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-207-P4

Pollutant: Carbon Dioxide Equivalents (CO₂e)
Emission Limit(s): 710,592 tons/yr
Authority for Requirement: DNR Construction Permit 13-A-207-P4

⁽¹⁾ Combined total emissions allowed for EUs 200 (Primary Reformer), 206a (Syngas Flare), 206b (Pilot Burner for Syngas Flare), 207a (Ammonia Flare), 207b (Pilot Burner for Ammonia Flare), 300b (Urea Granulation Air Heaters), 400 (Urea Boiler A), and 401 (Urea Boiler B). The emission limit is based on revised netting in Project Number 15-126 to keep the addition of the new urea and ammonia plants as a minor modification for the PSD program.

NSPS and NESHAP Applicability

This equipment is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart DDDDD for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and Subpart A – General Provisions.

Authority for Requirement: 40 CFR 63 Subpart DDDDD

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The Primary Reformer (EU-200) shall only use natural gas and process gases.
- B. In order to demonstrate compliance with the NO_x limit of 104.40 ton/yr the owner or operator shall:

- (1) Record the daily NO_x emissions (in tons) for the following emission units:
 - (a) Primary Reformer (EU-200),
 - (b) Syngas Flare (EU-206a),
 - (c) Pilot Burner for Syngas Flare (EU-206b),
 - (d) Ammonia Flare (EU-207a),
 - (e) Pilot Burner for Ammonia Flare (EU-207b),
 - (f) Urea Granulation Air Heaters (EU-300b),
 - (g) Urea Boiler A (EU-400), and
 - (h) Urea Boiler B (EU-401).
 - (2) Maintain the combined twelve (12) month rolling total of NO_x emissions (in tons) for the emission units listed in Condition B.(1). If the combined twelve (12) month rolling total of NO_x emissions exceeds 78.30 tons, the owner or operator shall:
 - (a) Immediately begin keeping the combined 365-day rolling total of NO_x emissions (in tons) for the emission units listed in Condition B.(1).
 - (b) Continue daily calculations for combined NO_x emissions until the combined 365-day rolling total drops below 78.30 tons for the remainder of the current calendar month plus one (1) additional calendar month. At that time, the rolling daily calculation of NO_x emissions will cease. If the combined NO_x emissions once again exceeds 78.30 tons, daily recordkeeping will be required again.
- C. The minimum ammonia injection into the control equipment (CE-200) shall be 10 lb/hr on an hourly average. The owner or operator shall:
- (1) Properly operate and maintain equipment to monitor the ammonia injection into the control equipment (CE-200). The monitoring device(s) and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals or per written facility specific operation and maintenance plan.
 - (2) Collect and record the ammonia injection rate into the control equipment (CE-200) on an hourly basis when the emission unit is operating, except for normal meter maintenance, calibration and replacement, and malfunctions.
- D. The owner or operator shall operate the emission unit (EU-200) and control equipment (CE-200) according to the respective manufacturer's specifications. In addition, to routine maintenance, the owner or operator shall conduct inspections occurring at a minimum of once per scheduled unit outage (or "Turnaround"). The owner or operator shall maintain a log of all maintenance and inspection activities performed on the emission unit (EU-200) and control equipment (CE-200). This log shall include, but is not necessarily limited to:
- (1) The date and time any inspection and/or maintenance was performed on the emission unit (EU-200) and/or control equipment (CE-200);
 - (2) Any issues identified during the inspection and the date each issue was resolved;
 - (3) Any issues addressed during the maintenance activities and the date each issue was resolved;
- E. The following requirements are BACT work practices for SSM operations:
- (1) Startup:

Startup of the primary reformer from cold conditions begins with the introduction of natural gas fuel to the burners and continues until the primary reformer reaches its minimum safe stable load, taking approximately forty-eight (48) hours. During startup, target parameters such as oxygen content, fuel/air ratios, turbulence, and temperature are variable in the convection section of the primary reformer. The startup period ends when the reformer reaches its “minimum safe stable load” which is defined as that operating condition when:

- (a) convection zone parameters fall within ranges recommended by the manufacturer;
- (b) catalyst tube temperatures in the radiant section have risen sufficiently to allow reforming reactions to take place; and
- (c) the burner system has reached effective operating conditions. Good Combustion Practices shall be used at all times during startup.

(2) Shutdown:

Shutdown of the emission unit from full load requires approximately twenty-four (24) hours. Shutdown BACT work practice standards consisting of Good Combustion Practices are applicable to this emission unit and shall be used at all times until the completion of shutdown. The shutdown period begins when the reformer falls below its minimum safe stable load as defined above.

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission unit and its air pollution control equipment as stated in 567 IAC 24.1(4).

F. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed changes.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 131.2

Stack Opening, (inches, dia.): 157

Exhaust Flow Rate (scfm): 222,300

Exhaust Temperature (°F): 330

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 13-A-207-P4

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Continuous Emissions Monitoring:

A. The following monitoring systems are required:

(1) NO_x:

The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and record the output of the system, for measuring nitrogen oxide (NO_x) emissions.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply.

(2) O₂ or CO₂:

The owner or operator shall install, calibrate, maintain, and operate a CEMS and record the output of the system, for measuring the oxygen (O₂) or carbon dioxide (CO₂) content of the flue gases at each location where NO_x emissions are monitored.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 3 (PS3) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply.

(3) Flowmeter:

The owner or operator shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of 40 CFR 60, Appendix B, Performance Specification 6 and 40 CFR 60, Appendix F, Procedure 1. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow of exhaust gases discharged to the atmosphere.

B. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits (CGA) and annual relative accuracy test audit (RATA). Annual RATAs and quarterly CGAs are required to be conducted on all CEMS and flowmeters required by this permit. The results shall be reported in units of the standards.

If requested by the Department, the owner/operator shall coordinate the quarterly cylinder

gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

- C. The CEMS required in Condition A. for NO_x and either O₂ or CO₂ shall be operated and the data recorded during all periods of operation including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments.
- D. The following data requirements shall apply to all CEMS for non-NSPS emission standards in this permit:
- (1) The CEMS required by this permit shall be operated and data recorded during all periods of operation of the emission unit except for CEM breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.
 - (2) The 1-hour average NO_x and CO₂ emission rates measured by the CEMS and flow measured by the flowmeter required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.
 - (3) For each hour of missing emission data (NO_x or CO₂), the owner or operator shall substitute data by:
 - (a) If the quarterly monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
 - (i) For the missing data period less than or equal to 24 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (ii) For a missing data period greater than 24 hours, substitute the greater of:
 - The 90th percentile hourly concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
 - The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (b) If the quarterly monitor data availability is at least 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
 - (a) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (b) For the missing data period of more than 8 hours, substitute the greater of:
 - (i) The 95th percentile hourly pollutant concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or

- (ii) The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
- (c) If the quarterly monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method approved by the Department.

Authority for Requirement: DNR Construction Permit 13-A-207-P4

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-201

Associated Equipment

Associated Emission Unit ID Numbers: EU-201

Emission Unit vented through this Emission Point: EU-201

Emission Unit Description: Carbon Dioxide Regenerator

Raw Material/Fuel: Ammonia

Rated Capacity: 133.33 tons of ammonia/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: Volatile Organic Compounds (VOC's)

Emission Limit(s): 61.9 tons/yr, 0.106 lb/ton of ammonia produced

Authority for Requirement: DNR Construction Permit 13-A-208-P2

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 2.22 lb/hr, 9.74 tons/yr, 0.020 lb/ton of ammonia produced

Authority for Requirement: DNR Construction Permit 13-A-208-P2

Pollutant: Carbon Dioxide (CO₂)

Emission Limit(s): 1.33 ton/ton of ammonia produced

Authority for Requirement: DNR Construction Permit 13-A-208-P2

Pollutant: Carbon Dioxide Equivalents (CO₂e)

Emission Limit(s): 1,553,440 tons/yr

Authority for Requirement: DNR Construction Permit 13-A-208-P2

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. For each month of operation determine the amount of CO₂ emitted by recording and calculating:
 - (1) The amount of ammonia produced for that month.
 - (2) The amount of CO₂ produced for that month.
 - (3) The amount of CO₂ flow measured at the CO₂ compressor for the month via the flowmeter required in Continuous Monitoring Systems Condition A.

- (4) The amount of CO₂ emitted for the month which is determined by subtracting the amount calculated in item (3) from the amount in item (2) and represented by the following formula:

$$\text{CO}_2 \text{ (emitted)} = \text{monthly CO}_2 \text{ produced} - \text{monthly CO}_2 \text{ flow measured at CO}_2 \text{ compressor}$$

- (5) Calculate the cumulative CO₂ emitted from EP 201 on a rolling twelve (12) month basis.

B. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e. a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the Work Practices Manual and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised Work Practices Manual shall be implemented upon the Department’s approval of the proposed changes.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 322

Stack Opening, (inches, dia.): 40

Exhaust Flow Rate (scfm): 36,900

Exhaust Temperature (°F): 115

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit: 13-A-208-P2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Continuous Monitoring Systems

A. Flowmeter:

The owner or operator shall install, certify, and operate a continuous flow monitoring system in accordance with the manufacturer’s recommendations. The flow monitoring system shall be calibrated and maintained annually or per the manufacturer’s recommendations, whichever is more frequent. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow

of CO₂ gases at the CO₂ compressor. All of the measured flow is conservatively assumed to be CO₂ for compliance demonstration purposes

- B. The following data requirements shall apply to all CEMS for non-NSPS emission standards in this permit:
- (1) The flowmeter required by this permit shall be operated and data recorded during all periods of operation of the emission unit except for breakdowns and repairs.
 - (2) The 1-hour average flow measured by the flowmeter required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.
 - (3) For each hour of missing CO₂ flow data, the owner or operator shall substitute data by:
 - (a) Multiplying the ratio of CO₂ consumed to urea produced (0.7386) by the urea production rate for that hour

Authority for Requirement: DNR Construction Permit: 13-A-208-P2

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-202

Associated Equipment

Associated Emission Unit ID Numbers: EU-202

Emission Unit vented through this Emission Point: EU-202

Emission Unit Description: Condensate Steam Stripper

Raw Material/Fuel: Ammonia

Rated Capacity: 133.33 tons of ammonia/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: Carbon Monoxide (CO)

Emission Limit(s): 1.10 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-209-P1

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

A. The following requirements are Best Available Control Technology (BACT) work practices for startup, shutdown, and malfunction operations:

(1) Startup:

The Condensate Steam Stripper (EU-202) is put into service very early in the process of starting the entire Ammonia Plant. Once steam is available within the unit, a small flow is sent through the Condensate Steam Stripper (EU-202) to warm it up. The clean steam is vented to the atmosphere for roughly six (6) hours. This ensures the Condensate Steam Stripper (EU-202) is available to clean condensate once that condensate is produced in the front end of the Ammonia Plant. As soon as steam is put into the Primary Reformer (EU-200) as part of the normal startup procedure of the Ammonia Plant, the steam from the Condensate Steam Stripper (EU-202) is routed to the Primary Reformer (EU-200).

(2) Shutdown:

During normal shutdown of the Ammonia Plant the air, natural gas, and steam are removed from the plant (in that order). The Condensate Steam Stripper (EU-202) is left in service throughout this process [approximately twenty-four (24) hours in duration] with the steam from the Condensate Steam Stripper (EU-202) routed to the reformer. It is possible that for short periods of time [less than four (4) hours], the

Condensate Steam Stripper (EU-202) could vent steam to the atmosphere during a normal shutdown.

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission unit and its air pollution control equipment as stated in 567 IAC 24.1(4).

B. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed changes

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 72
Stack Opening, (inches, dia.): 96
Exhaust Flow Rate (scfm): 34,200
Exhaust Temperature (°F): 500
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 13-A-209-P1

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-203

Associated Equipment

Associated Emission Unit ID Numbers: EU-203
Emissions Control Equipment ID Number: CE-203
Emissions Control Equipment Description: Nitrogen (N₂) Gas Blanket

Emission Unit vented through this Emission Point: EU-203
Emission Unit Description: Methyl-diethanol Amine (MDEA) Storage Tank
Raw Material/Fuel: Methyl-diethanol Amine (MDEA)
Rated Capacity: 220,000 gallons

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: Volatile Organic Compounds (VOC)
Emission Limit(s): 0.1 ton/yr
Authority for Requirement: DNR Construction Permit 13-A-254-P

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

Operating Limits

- A. This emission unit (EU-203) shall store only Methyl-diethanol Amine (MDEA).
- B. Determine the cumulative amount of VOC emitted from this emission point (EP 203) on a rolling-12-month basis for each month of operation

Authority for Requirement: DNR Construction Permit 13-A-254-P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40
Stack Opening, (inches, dia.): 3
Exhaust Flow Rate (scfm): Displacement
Exhaust Temperature (°F): 70
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 13-A-254-P

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-204

Associated Equipment

Associated Emission Unit ID Numbers: EU-204

Emission Unit vented through this Emission Point: EU-204

Emission Unit Description: Hydrogen Recovery Unit

Raw Material/Fuel: Ammonia

Rated Capacity: 133.33 tons of ammonia/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.

There are no applicable emission limits for this unit at this time.

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

A. The following requirements are Best Available Control Technology (BACT) work practices for startup, shutdown, and malfunction operations:

(1) Startup:

Startup begins by slowly pressuring up the Hydrogen Recovery Unit (EU-204) with synthesis gas from the ammonia circulation loop. Once the desired pressure profile is achieved, hydrogen rich gas purged from the synthesis loop is returned to the synthesis gas compressor. Fuel gas from the Hydrogen Recovery Unit (EU-204) is sent to the reformer to provide energy for the reforming reaction.

(2) Shutdown:

Feed is removed from the unit. For short periods pressure will be left in the system. Otherwise it will be depressured to flare.

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission unit and its air pollution control equipment as stated in 567 IAC 24.1(4).

B. For GHG emissions, the owner or operator shall:

(1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.

(2) Implement the practices contained within the *Work Practices Manual*.

(3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall

be implemented upon the Department's approval of the proposed changes.
Authority for Requirement: DNR Construction Permit 13-A-210-P2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 31
Stack Opening, (inches, dia.): 1
Exhaust Flow Rate (scfm): 300
Exhaust Temperature (°F): 90
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 13-A-210-P2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-205

Associated Equipment

Associated Emission Unit ID Numbers: EU-205

Emission Unit vented through this Emission Point: EU-205

Emission Unit Description: Startup Heater

Raw Material/Fuel: Natural Gas

Rated Capacity: 58.80 MMBTU/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(s): No Visible Emissions

Authority for Requirement: DNR Construction Permit 13-A-211-P3
567 IAC 23.3(2)"d"

Pollutant: PM_{2.5}

Emission Limit(s): 0.141 lb/hr, 0.007 tons/yr, 0.0024 lb/MMBtu

Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: PM₁₀

Emission Limit(s): 0.141 lb/hr, 0.007 tons/yr, 0.0024 lb/MMBtu

Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu, 0.007 tons/yr, 0.0024 lb/MMBtu

Authority for Requirement: DNR Construction Permit 13-A-211-P3
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permit 13-A-211-P3
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 5.61 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: Volatile Organic Compounds (VOC's)
Emission Limit(s): 0.004 tons/yr, 0.0014 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 1.14 lb/hr, 0.057 tons/yr, 0.0194 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: Carbon Dioxide (CO₂)
Emission Limit(s): 127 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: Methane (CH₄)
Emission Limit(s): 0.0023 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: Nitrous Oxide (N₂O)
Emission Limit(s): 0.00063 lb/MMBtu
Authority for Requirement: DNR Construction Permit 13-A-211-P3

Pollutant: Carbon Dioxide Equivalents (CO₂e)
Emission Limit(s): 374 tons/yr
Authority for Requirement: DNR Construction Permit 13-A-211-P3

NSPS and NESHAP Applicability

This equipment is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart DDDDD for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and Subpart A – General Provisions.

Authority for Requirement: 40 CFR 63 Subpart DDDDD

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The Startup Heater (EU-205) shall combust only natural gas.
- B. The natural gas consumption for the Startup Heater (EU-205) shall not exceed 5.76 million cubic feet (MMCF) of natural gas per year (yr). The owner or operator shall record the following:
 - (1) After the first twelve (12) months of operation, determine the cumulative amount of fuel used (in cubic feet/year) by this emission unit on a rolling-12-month basis for each month of operation.

C. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed changes.

Authority for Requirement: DNR Construction Permit 13-A-211-P3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 98.4

Stack Opening, (inches, dia.): 59

Exhaust Flow Rate (scfm): 10,700

Exhaust Temperature (°F): 1,530

Discharge Style: Vertical Unobstructed

Authority for Requirement: 13-A-211-P3

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-206

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
EU-206A	Syngas Flare	Syngas	12.1 MMscf process gas/hr	13-A-212-P4
EU-206B	Pilot Burner for Flare	Natural Gas	5.03 MMBtu/hr (total for 4 natural gas pilots)	

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): No Visible Emissions

Authority for Requirement: DNR Construction Permit 13-A-212-P4
567 IAC 23.3(2)"d"

Pollutant: PM_{2.5}

Emission Limit(s): 0.01 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-212-P4

Pollutant: PM₁₀

Emission Limit(s): 0.01 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-212-P4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 13-A-212-P4
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permit 13-A-212-P4
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.41 lb/hr, 104.40 ton/yr⁽¹⁾

Authority for Requirement: DNR Construction Permit 13-A-212-P4

⁽¹⁾ Combined total emissions allowed for EUs 200 (Primary Reformer), 206a (Syngas Flare), 206b (Pilot Burner for Syngas Flare), 207a (Ammonia Flare), 207b (Pilot Burner for Ammonia Flare), 300b (Urea Granulation Air Heaters), 400 (Urea Boiler A), and 401 (Urea Boiler B).

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 2.23 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-212-P4

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The Syngas Flare (EU-206A & EU-206B) shall be fueled with natural gas to maintain the pilot, maintain pressure to the flare during idling, and as enrichment fuel if needed.
- B. The Syngas Flare (EU-206A & EU-206B) is authorized to flare syngas.
- C. For purposes of the BACT work practice on the Syngas Flare (EU-206A & EU-206B), it shall:
 - (1) Be designed for and operated with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
 - (2) Be operated with a pilot flame present at all times. The owner or operator shall:
 - (a) Use a thermocouple or any other equivalent device to detect the presence of a pilot flame. The owner or operator shall:
 - (i) Properly maintain equipment used to continuously monitor the pilot flame.
 - (ii) Record when the monitoring equipment is down for service or malfunctioning. The recordkeeping shall include:
 - The length of time the monitoring equipment was malfunctioning or down for service and
 - The problem(s) with the monitoring equipment.
 - (iii) Use a visual observation to verify the presence of a pilot flame if the monitoring equipment is malfunctioning or down for service. The owner or operator shall keep a record of the visual observations and the records shall at a minimum contain the following information:
 - The date and time the visual observations began,
 - The reason for the visual observations,
 - The frequency of visual observations, and
 - The date and time the visual observations ended.
 - (b) Record any periods of time during which there was no pilot flame.
 - (3) Be designed to ensure smokeless operation.
- D. The owner or operator shall maintain records of any maintenance work performed on the Syngas Flare (EU-206A & EU-206B).
- E. For purposes of a work practice BACT on the Syngas Flare (EU-206A & EU-206B), the owner or operator shall
 - (1) Keep a copy of the required “*Flare Minimization Plan*” on-site.
 - (2) Implement the practices contained within the *Flare Minimization Plan*.
 - (3) Revise the *Flare Minimization Plan* and submit the revisions to the Department as necessary to document any proposed changes. The revised *Flare Minimization Plan* shall be implemented upon the Department’s approval of the proposed changes.
- F. The owner or operator shall record and maintain the following monthly records:

- (1) The number of hours that the flare was in operation,
 - (2) The emissions from the flare for each pollutant for that month,
 - (3) The rolling twelve (12) month total of the number of hours that the flare was in operation, and
 - (4) The rolling twelve (12) month total emissions for each pollutant for each month of operation.
- G. In order to demonstrate compliance with the NO_x limit of 104.40 ton/yr, the owner or operator shall:
- (1) Record the daily NO_x emissions (in tons) for the following emission units:
 - (a) Primary Reformer (EU-200),
 - (b) Syngas Flare (EU-206A),
 - (c) Pilot Burner for Syngas Flare (EU-206B),
 - (d) Ammonia Flare (EU-207A),
 - (e) Pilot Burner for Ammonia Flare (EU-207B),
 - (f) Urea Granulation Air Heaters (EU-300B),
 - (g) Urea Boiler A (EU-400), and
 - (h) Urea Boiler B (EU-401)
 - (2) Maintain the combined twelve (12) month rolling total of NO_x emissions (in tons) for the emission units listed in Condition G.(1). If the combined twelve (12) month rolling total of NO_x emissions exceeds 78.30 tons, the owner or operator shall:
 - (a) Immediately begin keeping the combined 365-day rolling total of NO_x emissions (in tons) for the emission units listed in Condition G.(1).
 - (b) Continue daily calculations for combined NO_x emissions until the combined 365-day rolling total drops below 78.30 tons for the remainder of the current calendar month plus one (1) additional calendar month. At that time, the rolling daily calculation of NO_x emissions will cease. If the combined NO_x emissions once again exceeds 78.30 tons, daily recordkeeping will be required again.
- H. For GHG emissions, the owner or operator shall:
- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a "*Work Practices Manual*") for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
 - (2) Implement the practices contained within the *Work Practices Manual*.
 - (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department's approval of the proposed changes.

Authority for Requirement: DNR Construction Permit 13-A-212-P4

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 322
Stack Opening, (inches, dia.): 92
Exhaust Flow Rate (scfm): 500 (just pilot burner), 6,700 (flare events)
Exhaust Temperature (°F): 240 (just pilot burner), 1,740 (flare events)
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 13-A-212-P4

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring

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: EP-207

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EU-207A	Ammonia Flare	Ammonia, Process Gas	14.3 MMscf process gas/hr	13-A-213-P4
			11.2 tons of ammonia/hr	
			151.3 tons/5 min	
EU-207B	Pilot Burner for Flare	Natural Gas	5.03 MMBtu/hr (Total for 4 natural gas pilots)	

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): No Visible Emissions

Authority for Requirement: DNR Construction Permit 13-A-213-P4
567 IAC 23.3(2)"d"

Pollutant: PM_{2.5}

Emission Limit(s): 0.01 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-213-P4

Pollutant: PM₁₀

Emission Limit(s): 0.01 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-213-P4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 13-A-213-P4
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permit 13-A-213-P4
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.41 lb/hr, 104.40 tons/yr⁽¹⁾

Authority for Requirement: DNR Construction Permit 13-A-213-P4

⁽¹⁾ Combined total emissions allowed for EUs 200 (Primary Reformer), 206a (Syngas Flare), 206b (Pilot Burner for Syngas Flare), 207a (Ammonia Flare), 207b (Pilot Burner for Ammonia Flare), 300b (Urea Granulation Air Heaters), 400 (Urea Boiler A), and 401 (Urea Boiler B).

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 2.23 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-213-P4

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The Ammonia Flare (EU-207A & EU-207B) shall be fueled with natural gas to maintain the pilot, maintain pressure to the flare during idling, and as enrichment fuel if needed.
- B. The Ammonia Flare (EU-207A & EU-207B) is authorized to flare ammonia.
- C. For purposes of the BACT work practice on the Ammonia Flare (EU-207A & EU-207B), it shall:
 - (1) Be designed for and operated with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
 - (2) Be operated with a pilot flame present at all times. The owner or operator shall:
 - (a) Use a thermocouple or any other equivalent device to detect the presence of a pilot flame. The owner or operator shall:
 - (i) Properly maintain equipment used to continuously monitor the pilot flame.
 - (ii) Record when the monitoring equipment is down for service or malfunctioning. The recordkeeping shall include:
 - The length of time the monitoring equipment was malfunctioning or down for service and
 - The problem(s) with the monitoring equipment.
 - (iii) Use a visual observation to verify the presence of a pilot flame if the monitoring equipment is malfunctioning or down for service. The owner or operator shall keep a record of the visual observations and the records shall at a minimum contain the following information:
 - The date and time the visual observations began,
 - The reason for the visual observations,
 - The frequency of visual observations, and
 - The date and time the visual observations ended.
 - (b) Record any periods of time during which there was no pilot flame.
 - (3) Be designed to ensure smokeless operation.
- D. The owner or operator shall maintain records of any maintenance work performed on the Ammonia Flare (EU-207A & EU-207B).
- E. For purposes of a work practice BACT on the Ammonia Flare (EU-207A & EU-207B), the owner or operator shall
 - (1) Keep a copy of the required “*Flare Minimization Plan*” on-site.
 - (2) Implement the practices contained within the *Flare Minimization Plan*.
 - (3) Revise the *Flare Minimization Plan* and submit the revisions to the Department as necessary to document any proposed changes. The revised *Flare Minimization Plan* shall be implemented upon the Department’s approval of the proposed changes.
- F. The owner or operator shall record and maintain the following monthly records:

- (1) The number of hours that the flare was in operation,
 - (2) The emissions from the flare for each pollutant for that month,
 - (3) The rolling twelve (12) month total of the number of hours that the flare was in operation, and
 - (4) The rolling twelve (12) month total emissions for each pollutant for each month of operation.
- G. In order to demonstrate compliance with the NO_x limit of 104.40 ton/yr, the owner or operator shall:
- (1) Record the daily NO_x emissions (in tons) for the following emission units:
 - (a) Primary Reformer (EU-200),
 - (b) Syngas Flare (EU-206A),
 - (c) Pilot Burner for Syngas Flare (EU-206B),
 - (d) Ammonia Flare (EU-207A),
 - (e) Pilot Burner for Ammonia Flare (EU-207B),
 - (f) Urea Granulation Air Heaters (EU-300B),
 - (g) Urea Boiler A (EU-400), and
 - (h) Urea Boiler B (EU-401).
 - (2) Maintain the combined twelve (12) month rolling total of NO_x emissions (in tons) for the emission units listed in Condition G.(1). If the combined twelve (12) month rolling total of NO_x emissions exceeds 78.30 tons, the owner or operator shall:
 - (a) Immediately begin keeping the combined 365-day rolling total of NO_x emissions (in tons) for the emission units listed in Condition G.(1).
 - (b) Continue daily calculations for combined NO_x emissions until the combined 365-day rolling total drops below 78.30 tons for the remainder of the current calendar month plus one (1) additional calendar month. At that time, the rolling daily calculation of NO_x emissions will cease. If the combined NO_x emissions once again exceeds 78.30 tons, daily recordkeeping will be required again.
- H. For GHG emissions, the owner or operator shall:
- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
 - (2) Implement the practices contained within the *Work Practices Manual*.
 - (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed changes

Authority for Requirement: DNR Construction Permit 13-A-213-P4

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 322
Stack Opening, (inches, dia.): 92
Exhaust Flow Rate (scfm): 500 (just pilot burner), 6,700 (flare events)
Exhaust Temperature (°F): 240 (just pilot burner), 1,740 (flare events)
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 13-A-213-P4

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-208

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
EU-208A	Ammonia Tank Flare	Ammonia	20,643 lb ammonia/hr	13-A-214-P2
EU-208B	Pilot Burner for Flare	Natural Gas	0.18 MMBtu/hr (Total for 2 natural gas pilots)	

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): No Visible Emissions

Authority for Requirement: DNR Construction Permit 13-A-214-P2
567 IAC 23.3(2)"d"

Pollutant: PM_{2.5}

Emission Limit(s): 0.00036 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-214-P2

Pollutant: PM₁₀

Emission Limit(s): 0.00036 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-214-P2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 13-A-214-P2
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permit 13-A-214-P2
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.015 lb/hr, 1.90 tons/yr

Authority for Requirement: DNR Construction Permit 13-A-214-P2

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 0.08 lb/hr

Authority for Requirement: DNR Construction Permit 13-A-214-P2

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The Ammonia Storage Tank Flare (EU-208A & EU-208B) shall be fueled with natural gas to maintain the pilot, maintain pressure to the flare during idling, and as enrichment fuel if needed.
- B. The Ammonia Storage Tank Flare (EU-208A & EU-208B) is authorized to flare ammonia.
- C. For purposes of the BACT work practice on the Ammonia Storage Tank Flare (EU-208A & EU-208b), it shall:
 - (1) Be designed for and operated with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
 - (2) Be operated with a pilot flame present at all times. The owner or operator shall:
 - (a) Use a thermocouple or any other equivalent device to detect the presence of a pilot flame. The owner or operator shall:
 - (i) Properly maintain equipment used to continuously monitor the pilot flame.
 - (ii) Record when the monitoring equipment is down for service or malfunctioning. The recordkeeping shall include:
 - The length of time the monitoring equipment was malfunctioning or down for service and
 - The problem(s) with the monitoring equipment.
 - (iii) Use a visual observation to verify the presence of a pilot flame if the monitoring equipment is malfunctioning or down for service. The owner or operator shall keep a record of the visual observations and the records shall at a minimum contain the following information:
 - The date and time the visual observations began,
 - The reason for the visual observations,
 - The frequency of visual observations, and
 - The date and time the visual observations ended.
 - (b) Record any periods of time during which there was no pilot flame.
 - (3) Be designed to ensure smokeless operation.
- D. The owner or operator shall maintain records of any maintenance work performed on the Ammonia Storage Tank Flare (EU-208A & EU-208B).
- E. For purposes of a work practice BACT on the Ammonia Storage Tank Flare (EU-208A & EU-208B), the owner or operator shall
 - (1) Keep a copy of the required “*Flare Minimization Plan*” on-site.
 - (2) Implement the practices contained within the *Flare Minimization Plan*.

- (3) Revise the *Flare Minimization Plan* and submit the revisions to the Department as necessary to document any proposed changes. The revised *Flare Minimization Plan* shall be implemented upon the Department's approval of the proposed changes.

F. The owner or operator shall record and maintain the following monthly records:

- (1) The number of hours that the flare was in operation,
- (2) The emissions from the flare for each pollutant for that month,
- (3) The rolling twelve (12) month total of the number of hours that the flare was in operation, and
- (4) The rolling twelve (12) month total emissions for each pollutant for each month of operation.

G. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a "*Work Practices Manual*") for the facility (Plant Number 97-01-030).
- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department's approval of the proposed changes.

Authority for Requirement: DNR Construction Permit 13-A-214-P2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 65

Stack Opening, (inches, dia.): 8

Exhaust Flow Rate (scfm): 150 (just pilot burner); 37,750 (flare vents)

Exhaust Temperature (°F): 1,700

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 13-A-214-P2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-300

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-300A	Urea Granulation Process	Wet Scrubbers (CE-300, CE-300a)	Urea	192.5 tons of urea/hr	13-A-215-P4
EU-300B	Granulation Air Heaters		Natural Gas	54.6 MMBTU/hr	
EU-305	LP Offgases Absorber		Urea	192.5 tons of urea/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(s): 40%

Authority for Requirement: DNR Construction Permit 13-A-215-P4
567 IAC 23.3(2)"d"

Pollutant: PM_{2.5}

Emission Limit(s): 21.3 lb/hr, 91.1 tons/yr, 0.108 lb/ton

Authority for Requirement: DNR Construction Permit 13-A-215-P4

Pollutant: PM₁₀

Emission Limit(s): 21.3 lb/hr, 92.8 tons/yr, 0.11 lb/ton

Authority for Requirement: DNR Construction Permit 13-A-215-P4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf, 92.8 tons/yr, 0.11 lb/ton

Authority for Requirement: DNR Construction Permit 13-A-215-P4
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permit 13-A-215-P4
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 1.34 lb/hr, 104.40⁽¹⁾ tons/yr

Authority for Requirement: DNR Construction Permit 13-A-215-P4

⁽¹⁾ Combined total emissions allowed for EUs 200 (Primary Reformer), 206a (Syngas Flare), 206b (Pilot Burner for Syngas Flare), 207a (Ammonia Flare), 207b (Pilot Burner for Ammonia Flare), 300b (Urea Granulation Air Heaters), 400 (Urea Boiler A), and 401 (Urea Boiler B).

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 59.1 tons/yr, 0.07 lb/ton
Authority for Requirement: DNR Construction Permit 13-A-215-P4

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 180 lb/hr, 43.1 tons/yr, 69.0 lb/hr
Authority for Requirement: DNR Construction Permit 13-A-215-P4

Pollutant: Carbon Dioxide (CO₂)
Emission Limit(s): 11,104 lb/hr
Authority for Requirement: DNR Construction Permit 13-A-215-P4

Pollutant: Methane (CH₄)
Emission Limit(s): 310 lb/hr
Authority for Requirement: DNR Construction Permit 13-A-215-P4

Pollutant: Nitrous Oxides (N₂O)
Emission Limit(s): 3.0 lb/hr
Authority for Requirement: DNR Construction Permit 13-A-215-P4

Pollutant: Carbon Dioxide Equivalents (CO₂e)
Emission Limit(s): 54,000 tons/yr
Authority for Requirement: DNR Construction Permit 13-A-215-P4

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The minimum total liquor feed rate to the control equipment (CE-300) shall be 195,000 pounds (lbs) on an hourly average, and the minimum additive feed rate to the control equipment (CE-300) shall be equivalent to 630 lb of pure nitric acid/hr on an hourly average. The owner or operator shall collect and record the following feed rates to the control equipment (CE-300) on an hourly basis when the emission units in this permit are operating, except for normal meter maintenance, calibration, and replacement, and malfunction:
 - (1) The total liquor feed rate and
 - (2) The additive feed rate.

- B. The owner or operator shall properly operate and maintain equipment to monitor the total liquor feed rate and the additive feed rate to the control equipment (CE-300). The monitoring device(s) and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals or per written facility specific operation and maintenance plan.

- C. The following requirements are Best Available Control Technology (BACT) work

practices for startup, shutdown, and malfunction (SSM) operations:

(1) Startup:

Startup of the urea granulation plant from cold conditions begins with the introduction of liquid urea feed, which has been enhanced by urea formaldehyde precondensate, and fluidization air into the granulator. The startup procedure takes approximately two (2) days. During plant startup, several individual processes and equipment begin operation including two cooling sections, crusher, bucket elevator, wet scrubber for particulate control and acidic scrubber for ammonia control. The startup period ends when:

- (a) operating temperatures across the process reach the required profile,
- (b) stable granulated urea production is achieved and
- (c) emission control equipment has reached required reduction efficiencies.

(2) Shutdown:

Shutdown of the urea granulation plant from full load requires approximately twelve (12) hours. The shutdown period begins when air flow to the granulator and coolers falls below the levels needed to maintain the required temperature profile and stable granulated urea production. The particulate/ammonia scrubber system will be discontinued when exhaust temperatures from the granulator and coolers rise above the levels indicated for startup.

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission unit and its air pollution control equipment as stated in 567 IAC 24.1(4).

- D. The Urea Granulation Air Heaters (EU-300B) shall combust only natural gas.
- E. The Urea Granulation Air Heaters (EU-300B) shall not combust more than 79.0 million cubic feet (MMCF) of natural gas per year. The owner or operator shall collect and record the following records:
- (1) Determine the cumulative amount of fuel combusted (in cubic feet/yr) by the Urea Granulation Air Heaters (EU-300B) on a rolling twelve (12) month basis for each month of operation.
- F. In order to demonstrate compliance with the 43.1 ton/yr limit for CO, the owner or operator shall:
- (1) Record the daily CO emissions (in tons) based on the most recent Urea Granulation Stack (EP-300) stack test approved by the Department.
 - (2) Maintain the twelve (12) month rolling total of CO emissions (in tons) for the Urea Granulation Stack (EP-300). If the twelve (12) month rolling total of CO emissions exceeds 32.3 tons, the owner or operator shall:
 - (a) Immediately begin keeping the 365-day rolling total of CO emissions (in tons) for the Urea Granulation Stack (EP-300).
 - (b) Continue daily calculations for CO emissions until the 365-day rolling total drops below 32.3 tons for the remainder of the current calendar month plus one (1) additional calendar month. At that time, the rolling daily calculation of CO

emissions will cease. If the CO emissions once again exceed 32.3 tons, daily recordkeeping will be required again.

- G. In order to demonstrate compliance with the 54,000 ton/yr limit for CO₂e, the owner or operator shall:
- (1) Record the daily CO₂e emissions (in tons) based on the most recent Urea Granulation Stack (EP-300) stack test approved by the Department.
 - (2) Maintain the twelve (12) month rolling total of CO₂e emissions (in tons) for the Urea Granulation Stack (EP-300). If the twelve (12) month rolling total of CO₂e emissions exceeds 40,500 tons, the owner or operator shall:
 - (a) Immediately begin keeping the 365-day rolling total of CO₂e emissions (in tons) for the Urea Granulation Stack (EP-300).
 - (b) Continue daily calculations for CO₂e emissions until the 365-day rolling total drops below 40,500 tons for the remainder of the current calendar month plus one (1) additional calendar month. At that time, the rolling daily calculation of CO₂e emissions will cease. If the CO₂e emissions once again exceed 40,500 tons, daily recordkeeping will be required again.
- H. In order to demonstrate compliance with the NO_x limit of 104.40 ton/yr, the owner or operator shall:
- (1) Record the daily NO_x emissions (in tons) for the following emission units:
 - (a) Primary Reformer (EU-200),
 - (b) Syngas Flare (EU-206A),
 - (c) Pilot Burner for Syngas Flare (EU-206B),
 - (d) Ammonia Flare (EU-207A),
 - (e) Pilot Burner for Ammonia Flare (EU-207B),
 - (f) Urea Granulation Air Heaters (EU-300b),
 - (g) Urea Boiler A (EU-400), and
 - (h) Urea Boiler B (EU-401).
 - (2) Maintain the combined twelve (12) month rolling total of NO_x emissions (in tons) for the emission units listed in Condition H.(1). If the combined twelve (12) month rolling total of NO_x emissions exceeds 78.30 tons, the owner or operator shall:
 - (a) Immediately begin keeping the combined 365-day rolling total of NO_x emissions (in tons) for the emission units listed in Condition H.(1).
 - (b) Continue daily calculations for combined NO_x emissions until the combined 365-day rolling total drops below 78.30 tons for the remainder of the current calendar month plus one (1) additional calendar month. At that time, the rolling daily calculation of NO_x emissions will cease. If the combined NO_x emissions once again exceeds 78.30 tons, daily recordkeeping will be required again.
- I. In accordance with 40 CFR §60.40c(g)(1), the owner or operator shall record and maintain records of the amount of each fuel combusted during each operating day in EU-300B. As an alternative to this requirement per 40 CFR §60.40c(g)(2) and 40 CFR §60.40c(g)(3), the owner or operator may elect to either:
- (1) Record and maintain records of the amount of each fuel combusted during each calendar month [See 40 CFR §60.40c(g)(2)] or
 - (2) Record and maintain records of the total amount of each steam generating unit fuel

delivered to that property during each calendar month [See 40 CFR §60.40c(g)(3)].

- J. For GHG emissions, the owner or operator shall:
- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
 - (2) Implement the practices contained within the *Work Practices Manual*.
 - (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed changes.

Authority for Requirement: DNR Construction Permit 13-A-215-P4

New Source Performance Standards (NSPS)

The Urea Granulation Air Heaters, EU-300B, are subject to the following federal regulation: New Source Performance Standards for Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60 Subpart Dc]. Also subject to Subpart A: General Provisions

Authority for Requirement: 567 IAC 23.1(2)"III"
40 CFR Part 60 Subpart Dc

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 300

Stack Opening, (inches, dia.): 157

Exhaust Flow Rate (scfm): 655,100

Exhaust Temperature (°F): 110

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 13-A-215-P4

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Stack Testing:

Pollutant	Frequency	Test Method
PM _{2.5}	Quarterly ¹	40 CFR 51, Appendix M, 201A with 202
PM ₁₀	Quarterly ¹	40 CFR 51, Appendix M, 201A with 202
PM – State	Quarterly ¹	40 CFR 60, Appendix A, Method 5 40 CFR 51 Appendix M Method 202

⁽¹⁾ The owner or operator shall conduct stack testing once per calendar quarter with a minimum of sixty (60) days between each quarterly test. Upon the completion of eight (8) quarterly tests that demonstrate compliance with the Emission Limits section of this permit, the owner or operator may request to reduce the frequency of the compliance testing.

Authority for Requirement: DNR Construction Permit 13-A-215-P4

The owner of this equipment or the owner’s authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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)

CAM Plan for CE-300 Scrubber Emission Point 300

I. Background

A. Emissions Unit

Description: Urea Granulation Process and Granulation Air Heaters Stack

Identification: Emission Units: 300a, 300b

Control Equipment: CE-300 (Granulator Scrubber), CE-300A (Cooler Scrubber)

Facility: CF Industries Nitrogen, LLC – Port Neal Nitrogen Complex

Plant Number 97-01-030

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Iowa DNR Construction Permit 13-A-215-P4

PM: 0.11 lb/ton and 92.8 tpy (BACT), 0.1 gr/dscf (567 IAC 23.3(2)a)

PM10: 0.11 lb/ton and 92.8 tpy (BACT), 21.3 lb/hr (dispersion modeling)

PM2.5: 0.108 lb/ton and 91.1 tpy (BACT), 21.3 lb/hr (dispersion modeling)

Monitoring requirements: Hourly readings of minimum total liquor feed rate and minimum additive feed rate to the scrubber

C. Control Equipment

Cooler Scrubber (CE-300A) uses diluted urea liquor as a scrubbant to remove urea particles from the carryover of the cooling process. The Granulator Scrubber (CE-300) uses nitric acid and diluted urea liquor as a scrubbant to remove carryover ammonia and urea particles from the granulation formation.

II. Monitoring Approach

A. Indicators and Ranges

1. Hourly average minimum total liquor feed rate to the Granulator Scrubber (CE-300) of 195,000 pounds,
2. Hourly average minimum total liquor feed rate to the Cooler Scrubber (CE-300A) of 360,000 pounds, and
3. Hourly average minimum additive feed rate to the Granulator Scrubber (CE-300) of 630 pounds as pure nitric acid.

Minimum values are not applicable during periods of startup and shutdown or times in which the urea granulation process is not operating.

B. Measurement Approach, Data Collection, Record Keeping

CF utilizes continuous parameter monitors to record the minimum total liquor feed rates and minimum additive feed rate. Hourly records are maintained electronically in the DCS. Records are maintained for five years.

Personnel periodically check the recorded data, and an alarm will occur when the indicators drop below the minimum ranges.

Calibration of the flow meters are completed as specified in the manufacturer's recommendations and/or written facility specific O&M Plan. Preventative maintenance and required maintenance, including gauge calibrations, are initiated through the facility's maintenance work order system.

Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five years.

C. Quality Improvement Plan (QIP) Threshold

A QIP will be required to be submitted to the IDNR if an accumulation of excursions of either the total liquor feed rate or the additive feed rate indicators exceed 5 percent of the scrubbers' normal operating time for a 6-month reporting period. All the requirements in 40 CFR 64.8(b) shall be fulfilled if a QIP plan is required.

D. Performance Criteria and Reporting

Either a minimum total liquor feed rate or a minimum additive feed rate below the ranges specified may indicate a decrease in the performance of the scrubbers and potentially indicate an increase of particulate matter and/or ammonia emissions.

CF will immediately investigate the reason for the excursion. Corrective action to return the parameter that is outside of the normal range back to the normal range will be taken as soon as possible but no later than 12 hours from observation of the excursion.

Abnormal conditions discovered through equipment inspection or maintenance checks requires implementation of remediation within a reasonable timeframe.

Excursions or other monitoring deviations (operating conditions, emission limits, or reporting requirements) will be reported in the IDNR Semi-annual Monitoring and Annual Compliance Certification reports.

III. Justification

A. Rationale for selection of performance indicators

The minimum total liquor feed rate of 195,000 pounds per hour for CE-300, minimum total liquor feed rate of 360,000 pounds per hour for CE-300A, and the minimum additive feed rate of 630 pounds of pure nitric acid per hour for CE-300 is necessary to remove carryover ammonia and urea particles from the gas stream.

B. Stack testing

Quarterly PM, PM10, and PM2.5 compliance stack tests are required for at least eight (8) calendar quarters after startup after which time CF may petition IDNR to reduce the frequency. CF will review the stack test results to confirm compliance with the applicable emission standards and ensure normal indicator ranges were observed during the stack tests. The test results will be made available at the facility and at IDNR.

Emission Point ID Number: EP-301

Associated Equipment

Associated Emission Unit ID Number: EU-301
Emissions Control Equipment ID Number: CE-301
Emissions Control Equipment Description: Packed Bed Scrubber

Emission Unit vented through this Emission Point: EU-301
Emission Unit Description: Urea UF-85 Storage Tank
Raw Material/Fuel: Urea
Rated Capacity: 66,043 gallons; 355.2 gal/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: Volatile Organic Compounds (VOC)
Emission Limit(s): 0.046 lb/hr
Authority for Requirement: DNR Construction Permit 13-A-216-P3

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. This emission unit (EU-301) shall store only formaldehyde based resin with a maximum true vapor pressure as defined in 40CFR §60.111 less than 3.5 kPa (0.508 psi). The owner or operator shall keep records of:
 - (1) The material(s) stored in this emission unit (EU-301),
 - (2) A copy of the Safety Data Sheet (SDS) of each material stored in this emission unit (EU-301),
 - (3) The vapor pressure of each material stored in this emission unit (EU-301), and
 - (4) The maximum true vapor pressure (as defined in 40 CFR §60.111) for each VOL stored in this emission unit (EU-301).
- B. The maximum true vapor pressure (as defined in 40 CFR §63.2550) of all HAP stored in this emission unit (EU-301) shall not exceed 0.69 kPa (0.100 psi). The owner or operator shall keep records of:
 - (1) The maximum true vapor pressure (as defined in 40 CFR §63.2550) of each HAP stored in this emission unit (EU-301).

Authority for Requirement: DNR Construction Permit 13-A-216-P3
567 IAC 23.1(4)"cf"
40 CFR Part 63 Subpart FFFF

NSPS and NESHAP Applicability

This emission unit is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart FFFF: Miscellaneous Organic Chemical Manufacturing and Subpart A: General Provisions.

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

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 210
Stack Opening, (inches, dia.): 4
Exhaust Flow Rate (scfm): Displacement
Exhaust Temperature (°F): 105
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 13-A-216-P3

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-302

Associated Equipment

Associated Emission Unit ID Numbers: EU-302

Emissions Control Equipment ID Number: CE-302

Emissions Control Equipment Description: Leak Detection and Repair (LDAR) Monitoring System

Emission Unit vented through this Emission Point: EU-302

Emission Unit Description: VOC Emissions from Equipment Leaks

Raw Material/Fuel: Volatile Organic Compounds (VOC)

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: Volatile Organic Compounds (VOC)

Emission Limit(s): 3.4 tons/yr⁽¹⁾

Authority for Requirement: DNR Construction Permit 13-A-229-P1

⁽¹⁾ Standard is a twelve (12) month rolling total and includes all periods of operation including periods of startup, shutdown, or malfunction (SSM) and based on the LDAR system as control.

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

- A. The component count of the Urea 3 plant (i.e. equipment associated with original Project Number 13-037 and modifications associated with Project Numbers 14-086, 15-126, 16-194, and 16-498) shall be documented as to the number and types of components used upon startup of the Urea 3 plant. Components include, but are not limited to, valves, pumps, compressor seals, flanges, etc. All components shall be tested initially including those of vacuum service.
- B. For the purposes of Best Available Control Technology (BACT), the owner or operator shall:
 - (1) Meet the standards specified in NSPS Subpart VVa (40 CFR §60.482-1a – 40 CFR §60.482-11a) for the equipment leaks associated the Urea 3 plant (i.e. equipment associated with original Project Number 13-037 and modifications associated with Project Numbers 14-086, 15-126, 16-194, and 16-498),
 - (2) Calculate and record the VOC emissions based on the documented component count. Emission factors shall be based on EPA document 453/R-95-017 titled “Protocol for Equipment Leak Emission Estimates,”
 - (3) Use the following methodology to calculate VOC emissions:

- (a) Determine the component count for the Urea 3 plant (i.e. equipment associated with original Project Number 13-037 and modifications associated with Project Numbers 14-086, 15-126, 16-194, and 16-498). This count shall be updated with each modification to this part of the facility (plant number 97-01-030).
 - (b) From each month's leak detection tracking information, determine the following for each component type:
 - (i) The number or fraction of sources that were repaired the previous month that were found to be leaking this month.
 - (ii) The number or fraction of sources that were successfully repaired after being found to leaking in the previous months' monitoring.
 - (iii) The number or fraction of sources that were found to not be leaking during the previous months' monitoring, which were found to be leaking during this months' monitoring.
 - (c) Using the information collected in Condition B.(3)(b) above, determine the control efficiency of the leak detection and repair program as outlined in EPA's document 453/R-95-017 titled "Protocol for Equipment Leak Emission Estimates" (page 5-54 through 5-57). Control efficiencies listed in Table 5.2 (page 5-9) may be assumed for those components listed. If these control efficiencies are assumed, the information required by Condition B.(3)(b) above need not be recorded for that component type.
 - (d) Using the information collected above, determine the VOC emissions over the previous month from the new part of the plant (i.e., equipment associated with original Project Number 13-037 and modifications associated with Project Numbers 14-086, 15-126, 16-194, and 16-498) using the calculation methods outlined in EPA's document 453/R-95-017 titled "Protocol for Equipment Leak Emission Estimates" (page 2-11).
- (4) Meet all recordkeeping and reporting requirements per 40 CFR §60.486a and 40 CFR §60.487a.
- C. The owner or operator shall meet all applicable requirements of NESHAP Subpart FFFF (i.e., emission limits, work practice standards, compliance requirements, monitoring, and recordkeeping). The owner or operator shall keep an up to date checklist of applicable NESHAP Subpart FFFF requirements available for inspections.

Authority for Requirement: DNR Construction Permit 13-A-229-P1
 567 IAC 23.1(4)"cf"
 40 CFR Part 63 Subpart FFFF
 567 IAC 23.1(2)"nn"
 40 CFR 60 Subpart VVa

NSPS and NESHAP Applicability

This emission unit is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart FFFF: Miscellaneous Organic Chemical Manufacturing and Subpart A: General Provisions.

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

This emission unit is subject to New Source Performance Standards (NSPS) Subpart VVa: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006. Also subject to Subpart A: General Provisions

Authority for Requirements: 40 CFR 60 Subpart VVa
567 IAC 23.1(2)"nn"

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: Urea Loading

Associated Equipment

Emission Points	Emission Units	Emission Unit Descriptions	Control Equipment	Raw Materials	Rated Capacities	Construction Permits
EP-303	EU-303	Urea Railcar Loading	CE-303	Urea	10,000 tons/day	13-A-217-P
EP-304	EU-304	Urea Truck Loading	CE-304			13-A-218-P

Emissions Control Equipment Description: Bin Vent Filters

Applicable Requirements

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

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

Emission Unit	Pollutant	Emission Limit(s)	DNR Construction Permit 13-A-217-P
EU-303	Opacity	No Visible Emissions	567 IAC 23.3(2)"d"
	Particulate Matter (PM _{2.5})	0.0013 lb/hr	
		0.00108 lb/ton	
		1.97 tons/yr	
	Particulate Matter (PM ₁₀)	0.0013 lb/hr	
		0.0011 lb/ton	
		2.01 tons/yr	
	Particulate Matter (PM)	0.1 gr/dscf	567 IAC 23.3(2)"a"
		0.003 lb/ton	
5.48 tons/yr			

Emission Unit	Pollutant	Emission Limit(s)	DNR Construction Permit 13-A-218-P
EU-304	Opacity	No Visible Emissions	567 IAC 23.3(2)"d"
	Particulate Matter (PM _{2.5})	0.0017 lb/hr	
		0.00108 lb/ton	
		1.97 tons/yr	
	Particulate Matter (PM ₁₀)	0.0017 lb/hr	
		0.0011 lb/ton	
		2.01 tons/yr	
	Particulate Matter (PM)	0.1 gr/dscf	567 IAC 23.3(2)"a"
		0.003 lb/ton	
5.48 tons/yr			

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Emission Points	Stack Heights (ft from ground)	Stack Openings (inches, dia)	Exhaust Flow Rates (scfm)	Exhaust Temps. (°F)	Discharge Style	Authority for Requirement (DNR Construction Permits)
EP-303	80	10	1,500	70	Vertical	13-A-217-P
EP-304	95	10	2,000	70	Unobstructed	13-A-218-P

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-305

Associated Equipment

Associated Emission Unit ID Number: EU-305

Emission Unit vented through this Emission Point: EU-305

Emission Unit Description: LP Offgases Absorber

Raw Material/Fuel: Urea

Rated Capacity: 192.5 tons of urea/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.

There are no applicable emission limits for this emission unit at this time.

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

A. The following requirements are Best Available Control Technology (BACT) work practices for startup, shutdown, and malfunction operations:

(1) Startup:

The LP Offgases Absorber Vent (EU-305) is normally routed through the Granulator Scrubber (CE-300) and then to the Granulation Stack (EP-300). The startup of the Urea Synthesis Plant is preceded by commissioning some equipment in the Urea Granulation Plant. This ensures a smooth transition into the granulation plant and facilitates the routing of the LP Offgases Absorber directly to the scrubber system.

(2) Shutdown:

Shutdown of the Urea Granulation Scrubber system (CE-300) results in the LP Offgases Absorber (EU-305) being routed to a vent to ensure the gases are vented to a safe location when not routed to the Granulation Stack (EP-300).

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission unit and its air pollution control equipment as stated in 567 IAC 24.1(4).

B. For GHG emissions, the owner or operator shall:

(1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.

(2) Implement the practices contained within the *Work Practices Manual*.

(3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed changes

Authority for Requirement: DNR Construction Permit 13-A-219-P1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 210

Stack Opening, (inches, dia.): 14

Exhaust Flow Rate (scfm): 1,200

Exhaust Temperature (°F): 110

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 13-A219-P1

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-307

Associated Equipment

Associated Emission Unit ID Number: EU-307

Emission Unit vented through this Emission Point: EU-307

Emission Unit Description: CO₂ Silencer

Raw Material/Fuel: Carbon Dioxide

Rated Capacity: 125 tons/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.

There are no applicable emission limits for this emission unit at this time.

Operational Limits, Requirements, and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Records shall be kept on site for at least five (5) years and shall be available for inspection by the Department.

A. The following requirements are Best Available Control Technology (BACT) work practices for startup, shutdown, and malfunction (SSM) operations:

(1) Startup:

The CO₂ compressor is started during the process of bringing the Urea Synthesis Plant into production. As a flow of CO₂ is introduced to the compressor, some portion of that CO₂ is vented. The CO₂ is vented to EP-307. Venting is required to prevent surge conditions for the compressor. This venting typically lasts less than one (1) hour.

(2) Shutdown:

When the Urea Synthesis Plant is shutdown, the CO₂ is slowly removed from the plant. In order to protect the compressor from surge conditions, some of the CO₂ must be vented to the atmosphere. The CO₂ is vented to EP-307. The venting will normally last less than one (1) hour. On longer shutdowns when ammonia remains running the CO₂ will be vented back at the Ammonia Plant (CO₂ Regenerator).

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission unit and its air pollution control equipment as stated in 567 IAC 24.1(4).

B. The owner or operator shall prepare a work practice manual documenting all efficiency practices and practices to reduce greenhouse gas (GHG) emissions (i.e., a “*Work Practices Manual*”) at the facility (Plant Number 97-01-030) and submit the manual to the Department prior to the completion of construction of Project Number 13-037. This manual shall

specifically address control equipment operation and combustion control optimizations on equipment associated with Project Number 13-037, and all other efficiencies associated with the equipment with Project Number 13-037. The *Work Practices Manual* shall be implemented upon either the Department's review and approval or the completion of construction of Project Number 13-037 whichever is later. The *Work Practices Manual* shall be revised and submitted to the Department as necessary to document any proposed efficiency changes. The revised manual shall be implemented upon the Department's approval of the proposed changes.

Authority for Requirement: DNR Construction Permit 13-A-221-P1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 210
Stack Opening, (inches, dia.): 24
Exhaust Flow Rate (scfm): 36,900
Exhaust Temperature (°F): 85
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: Boiler A and Boiler B

Associated Equipment

Emission Points	Emission Units	Emission Unit Descriptions	Control Equipment	Raw Materials/Fuels	Rated Capacities	Construction Permits
EP-400	EU-400	Boiler A	CE-400A ⁽¹⁾	Natural Gas	458 MMBTU/hr	13-A-234-P4
			CE-400B ⁽²⁾			
			CE-400C ⁽³⁾			
EP-401	EU-401	Boiler B	CE-401A ⁽¹⁾		458 MMBTU/hr	13-A-235-P4
			CE-401B ⁽²⁾			
			CE-401C ⁽³⁾			

⁽¹⁾ Selective Catalytic Reduction (SCR)

⁽²⁾ Oxidation Catalyst

⁽³⁾ Low NOx Burners (LNB)

Continuous Emissions Monitors ID Numbers: ME-400A, ME-400B, ME-401A, ME-401B

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): No Visible Emissions

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: PM_{2.5}

Emission Limit(s): 1.10 lb/hr, 4.81 tons/yr, 0.0024 lb/ton

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: PM₁₀

Emission Limit(s): 1.10 lb/hr, 4.81 tons/yr, 0.0024 lb/ton

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu, 4.81 tons/yr, 0.0024 lb/ton

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 80 lb/hr, 104.40⁽¹⁾ tons/yr, 0.20 lb/MMBtu
Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4
567 IAC 23.1(2)"ccc"
40 CFR 60 Subpart Db

⁽¹⁾ Combined total emissions allowed for EUs 200 (Primary Reformer), 206a (Syngas Flare), 206b (Pilot Burner for Syngas Flare), 207a (Ammonia Flare), 207b (Pilot Burner for Ammonia Flare), 300b (Urea Granulation Air Heaters), 400 (Urea Boiler A), and 401 (Urea Boiler B).

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 2.81 tons/yr, 0.0014 lb/ton
Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 0.60 lb/hr, 2.61 tons/yr, 0.0013 lb/MMBtu
Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: Nitrous Oxides (N₂O)
Emission Limit(s): 0.00063 lb/MMBtu
Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: Carbon Dioxide (CO₂)
Emission Limit(s): 127 lb/MMBtu
Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: Methane (CH₄)
Emission Limit(s): 0.0023 lb/MMBtu
Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Pollutant: Carbon Dioxide Equivalents (CO₂e)
Emission Limit(s): 255,256 tons/yr
Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. Boilers A and B (EUs 400 & 401) shall combust only natural gas.
- B. In order to demonstrate compliance with the NO_x limit of 104.40 ton/yr, the owner or operator shall:
 - (1) Record the daily NO_x emissions (in tons) for the following emission units:
 - (a) Primary Reformer (EU-200),
 - (b) Syngas Flare (EU-206A),
 - (c) Pilot Burner for Syngas Flare (EU-206B),

- (d) Ammonia Flare (EU-207A),
 - (e) Pilot Burner for Ammonia Flare (EU-207B),
 - (f) Urea Granulation Air Heaters (EU-300B),
 - (g) Urea Boiler A (EU-400), and
 - (h) Urea Boiler B (EU-401).
- (2) Maintain the combined twelve (12) month rolling total of NO_x emissions (in tons) for the emission units listed in Condition B.(1). If the combined twelve (12) month rolling total of NO_x emissions exceeds 78.30 tons, the owner or operator shall:
- (a) Immediately begin keeping the combined 365-day rolling total of NO_x emissions (in tons) for the emission units listed in Condition B.(1).
 - (b) Continue daily calculations for combined NO_x emissions until the combined 365-day rolling total drops below 78.30 tons for the remainder of the current calendar month plus one (1) additional calendar month. At that time, the rolling daily calculation of NO_x emissions will cease. If the combined NO_x emissions once again exceed 78.30 tons, daily recordkeeping will be required again.
- C. The minimum ammonia injection into the control equipment (CEs 400A & 401A) shall be 1 lb/hr on an hourly average. The owner or operator shall:
- (1) Properly operate and maintain equipment to monitor the ammonia injection into the control equipment (CEs 400A & 401A). The monitoring device(s) and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals or per written facility specific operation and maintenance plan.
 - (2) Collect and record the ammonia injection rate into the control equipment (CEs 400A & 401A) on an hourly basis when the emission unit is operating, except for normal meter maintenance, calibration and replacement, and malfunctions.
- D. The minimum flue gas inlet temperature for the oxidation catalysts (CEs 400A & 401A) shall be 450 degrees Fahrenheit (°F). The owner or operator shall:
- (1) Properly operate and maintain equipment to monitor the inlet temperatures of the flue gas into the oxidation catalyst (CEs 400B & 401B). The monitoring device(s) and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals or per written facility specific operation and maintenance plan.
 - (2) Collect and record the inlet temperatures of the flue gas into the oxidation catalyst (CEs 400B & 401B) when the emission units are operating, except for normal meter maintenance, calibration and replacement, and malfunctions.
- E. The owner or operator shall operate the emission units (EUs 400 & 401) and control equipment (CEs 400A, 400B, 400C, 401A, 401B, and 401C) according to the respective manufacturer's specifications. In addition to routine maintenance, the owner or operator shall conduct inspections occurring at a minimum of once per scheduled unit outage (or "Turnaround"). The owner or operator shall maintain a log of all maintenance and inspection activities performed on the emission units (EUs 400 & 401) and control equipment (CEs 400A, 400B, 400C, 401A, 401B, and 401C). This log shall include, but is not necessarily limited to:
- (1) The date and time any inspection and/or maintenance was performed on the emission units (EUs 400 & 401) and/or control equipment (CEs 400A, 400B, 400C, 401A, 401B,

- & 401C);
 - (2) Any issues identified during the inspection and the date each issue was resolved;
 - (3) Any issues addressed during the maintenance activities and the date each issue was resolved;
- F. In accordance with 40 CFR §60.49b(d)(1), the owner or operator shall record and maintain records of the amount of natural gas combusted during each day and calculate the annual capacity factor for the reporting period. The annual capacity factor is determined on a twelve (12) month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
- G. In accordance with 40 CFR §60.49b(g), the owner or operator shall maintain records of the following information for each steam generating unit operating day:
- (1) Calendar date;
 - (2) The average hourly NO_x emission rates (in ng/J or lb/MMBTU heat input and expressed as NO₂) measured or predicted;
 - (3) The thirty (30) day average NO_x emission rates (ng/J or lb/MMBTU heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding thirty (30) steam generating unit operating days.
 - (4) Identification of the steam generating unit operating days when the calculated thirty (30) day average NO_x emission rates are in excess of the NO_x emission standards under 40 CFR §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;
 - (5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
 - (6) Identification of the times when emissions data have been excluded from the calculation of average emission rates and the reasons for excluding data;
 - (7) Identification of “F” factor used for calculations, method of determination, and the type of fuel combusted;
 - (8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;
 - (9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and
 - (10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.
- H. In accordance with 40 CFR §60.49b(r), the owner or operator that elects to use the fuel based compliance alternative in 40 CFR §60.42b (SO₂ limits) shall either:
- (1) Obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the gaseous fuel meets the definition of natural gas as defined in 40 CFR §60.41b and the applicable sulfur limit. Reports shall be submitted to the Administrator certifying that only natural gas that is known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

(2) Develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than sixty (60) days before the date the owner or operator intends to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain the following minimum information:

- The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;
- The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For natural gas a fuel receipt or tariff sheet is acceptable;
- The ratio of different fuels in the mixture; and
- The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

I. The following requirements are BACT work practices for SSM operations:

(1) Startup:

Startup of Boiler A and B (EUs 400 & 401) from cold conditions begins with a purge of the units to ensure the conditions are safe for the introduction of natural gas. Natural gas is introduced to the pilot burners once safe water levels are established and the purge cycle is complete. Upon establishment of pilots the main burner(s) can be lit. The boilers are slowly brought up to operating pressure over a period of twelve (12) hours. During startup, target parameters such as oxygen content, fuel/air ratios, water levels, and superheat tube temperatures are variable and monitored closely. The SCRs (CEs 400A & 401A) are turned on at 560 °F. The startup period ends when the boiler reaches the design operating pressure of 70 barg. The entire cold startup of the boiler can take approximately sixteen (16) hours.

(2) Shutdown:

Shutdown of the emission unit from full load requires approximately twelve (12) hours. Shutdown BACT work practice standards consisting of Good Combustion Practices are applicable to this emission units and shall be used at all times until the completion of shutdown. The shutdown period begins when the boiler is removed from the steam header and the firing of natural gas is reduced.

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission units and their air pollution control equipment as stated in 567 IAC 24.1(4).

J. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed changes.

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4
567 IAC 23.1(2)"ccc"
40 CFR Subpart Db

NSPS and NESHAP Applicability

This equipment is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart DDDDD for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and Subpart A – General Provisions.

Authority for Requirement: 40 CFR 63 Subpart DDDDD

This equipment is subject to New Source Performance Standards (NSPS) Subpart Db for Major Sources: Standards of Performance for Industrial, Commercial, and Institutional Steam Generating Units, and Subpart A – General Provisions.

Authority for Requirement: 40 CFR 60 Subpart Db
567 IAC 23.1(2) "ccc"

Emission Point Characteristics

The emission points shall conform to the specifications listed below.

Stack Height, (ft., from the ground): 130

Stack Opening, (inches, dia.): 75

Exhaust Flow Rate (scfm): 85,000

Exhaust Temperature (°F): 235

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Continuous Emission Monitoring Systems (CEMS)

A. The following monitoring systems are required:

(1) NO_x:

The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring systems (CEMS) and record the output of the systems, for measuring nitrogen oxide (NO_x) emissions.

The systems shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply.

(2) O₂ or CO₂:

The owner or operator shall install, calibrate, maintain, and operate a CEMS and record the output of the systems, for measuring the oxygen (O₂) or carbon dioxide (CO₂) content of the flue gases at each location where NO_x emissions are monitored.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 3 (PS3) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply.

(3) Flowmeter:

The owner or operator shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of 40 CFR 60, Appendix B, Performance Specification 6 and 40 CFR 60, Appendix F, Procedure 1. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow of exhaust gases discharged to the atmosphere.

- B. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits (CGA) and annual relative accuracy test audit (RATA). Annual RATAs and quarterly CGAs are required to be conducted on all CEMS and flowmeters required by this permit. The results shall be reported in units of the standards.

If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

- C. The CEMS required in Condition A. for NO_x and either O₂ or CO₂ shall be operated and the data recorded during all periods of operation including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments.
- D. The following data requirements shall apply to all CEMS for non-NSPS emission standards in this permit :
- (1) The CEMS required by this permit shall be operated and data recorded during all periods of operation of the emission unit except for CEM breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

- (2) The 1-hour average NO_x and CO₂ emission rates measured by the CEMS and flow measured by the flowmeter required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.
- (3) For each hour of missing emission data (NO_x or CO₂), the owner or operator shall substitute data by:
- (i) If the quarterly monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
 - (a) For the missing data period less than or equal to 24 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (b) For a missing data period greater than 24 hours, substitute the greater of:
 - The 90th percentile hourly concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
 - The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (ii) If the quarterly monitor data availability is at least 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
 - (a) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (b) For the missing data period of more than 8 hours, substitute the greater of:
 - (iii) The 95th percentile hourly pollutant concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
 - (iv) The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (iii) If the quarterly monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method approved by the Department.

Authority for Requirement: DNR Construction Permits 13-A-234-P4 & 13-A-235-P4
567 IAC 23.1(2)"ccc"
40 CFR 60 Subpart Db

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in

the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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: EP-402A

Associated Equipment

Associated Emission Unit ID Numbers: EU-402A
Emissions Control Equipment ID Number: CE-402A
Emissions Control Equipment Description: Drift Eliminator

Emission Unit vented through this Emission Point: EP- 402A
Emission Unit Description: Urea Cooling Tower
Raw Material/Fuel: Cooling Water
Rated Capacity: 64,570 gal/min (total for 4 cells)

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): No Visible Emissions

Authority for Requirement: DNR Construction Permit 13-A-236-P1

Pollutant: PM_{2.5}

Emission Limit(s): 0.45 lb/hr, 0.0005%⁽¹⁾

Authority for Requirement: DNR Construction Permit 13-A-236-P1

Pollutant: PM₁₀

Emission Limit(s): 0.45 lb/hr, 0.0005%⁽¹⁾

Authority for Requirement: DNR Construction Permit 13-A-236-P1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf, 0.0005%⁽¹⁾

Authority for Requirement: DNR Construction Permit 13-A-236-P1
567 IAC 23.3(2)"a"

⁽¹⁾ This is the required control efficiency of the drift eliminator (gallons of drift per gallon of cooling water flow).

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. The total dissolved solids (TDS) of the water used shall not exceed 2,800 ppm (monthly average).
- B. Chromium based containing water treatment chemicals (i.e., biocides, fungicides, scale inhibitors, etc.) shall not be used in this emission unit.

Authority for Requirement: DNR Construction Permit 13-A-236-P1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft., from the ground): 46.8
 Stack Opening, (inches, dia.): 444 (for each of 4 cells)
 Exhaust Flow Rate (scfm): 1,330,700 (for each of 4 cells)
 Exhaust Temperature (°F): 100
 Discharge Style: Vertical Unobstructed
 Authority for Requirement: DNR Construction Permit 13-A-236-P1

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

- A. An analysis of the TDS of the water used for each calendar month this emission unit is in use and the monthly average TDS of the water.
- B. A copy of the Material Safety Data Sheet (MSDS) for each water treatment chemical used in this emission unit.

Authority for Requirement: DNR Construction Permit 13-A-236-P1

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: EP-402B

Associated Equipment

Associated Emission Unit ID Numbers: EU-402B
Emissions Control Equipment ID Number: CE-402B
Emissions Control Equipment Description: Drift Eliminator

Emission Unit vented through this Emission Point: EP- 402B
Emission Unit Description: Ammonia 2 Cooling Tower
Raw Material/Fuel: Cooling Water
Rated Capacity: 145,291 gal/min (total for 9 cells)

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): No Visible Emissions
Authority for Requirement: DNR Construction Permit 13-A-237-P2

Pollutant: PM_{2.5}
Emission Limit(s): 1.02 lb/hr, 0.0005%⁽¹⁾
Authority for Requirement: DNR Construction Permit 13-A-237-P2

Pollutant: PM₁₀
Emission Limit(s): 1.02 lb/hr, 0.0005%⁽¹⁾
Authority for Requirement: DNR Construction Permit 13-A-237-P2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf, 0.0005%⁽¹⁾
Authority for Requirement: DNR Construction Permit 13-A-237-P2
567 IAC 23.3(2)"a"

⁽¹⁾ This is the required control efficiency of the drift eliminator (gallons of drift per gallon of cooling water flow).

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. The total dissolved solids (TDS) of the water used shall not exceed 2,800 ppm (monthly average). The owner or operator shall:
 - (1) Conduct an analysis of the TDS of the water used in this emission unit (EU-402b) for each calendar month,
 - (2) Calculate the average TDS content of the water used in this emission unit (EU-402b) for each month of operation, and
 - (3) Record the average TDS content of the water used in this emission unit (EU-402b) for each month of operation.

- B. Chromium based containing water treatment chemicals (i.e., biocides, fungicides, scale inhibitors, etc.) shall not be used in this emission unit. The owner or operator shall:
 - (1) Keep a copy of the Safety Data Sheet (SDS) for each water treatment chemical used in this emission unit.

Authority for Requirement: DNR Construction Permit 13-A-237-P2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft., from the ground): 46.8

Stack Opening, (inches, dia.): 444 (for each of 9 cells)

Exhaust Flow Rate (scfm): 1,299,400 (for each of 9 cells)

Exhaust Temperature (°F): 100

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 13-A-237-P2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

- A. An analysis of the TDS of the water used for each calendar month this emission unit is in use and the monthly average TDS of the water.
- B. A copy of the Material Safety Data Sheet (MSDS) for each water treatment chemical used in this emission unit.

Authority for Requirement: DNR Construction Permit 13-A-237-P2

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: Emergency Generators 1 and 2

Associated Equipment

Emission Points	Emission Units	Emission Unit Descriptions	Control Equipment	Raw Materials/Fuels	Rated Capacities	Construction Permits
EP-403	EU-403	Emergency Generator 1	CE-403	Diesel Fuel	3,634 bhp 173.5 gal/hr	13-A-238-P2
EP-404	EU-404	Emergency Generator 2	CE-404		3,634 bhp 173.5 gal/hr	13-A-239-P2

Emissions Control Equipment Description: Selective Catalytic Reduction

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 5% Normal Operation

20% Start-up, Shut-down, Malfunction, or Acceleration Mode

15% Lugging Mode

50% Peaks in either Acceleration or Lugging Modes

Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2
567 IAC 23.1(2)"yyy"
40 CFR 60 Subpart III

Pollutant: PM_{2.5}

Emission Limit(s): 0.41 lb/hr, 0.08 tons/yr⁽¹⁾, 0.20 g/kW-hr

Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

Pollutant: PM₁₀

Emission Limit(s): 0.41 lb/hr, 0.08 tons/yr⁽¹⁾, 0.20 g/kW-hr

Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

Pollutant: Particulate Matter (PM) Federal

Emission Limit(s): 0.20 g/kW-hr

Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2
567 IAC 23.1(2)"yyy"
40 CFR 60 Subpart III

Pollutant: Particulate Matter (PM) State
Emission Limit(s): 0.1 gr/dscf, 0.08 tons/yr⁽¹⁾, 0.20 g/kW-hr
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2
567 IAC 23.3(3)"b"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 4.00 lb/hr
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

Pollutant: Nitrogen Oxides (NO_x) + Non-Methane Hydrocarbons (NMHC)
Emission Limit(s): 6.4 g/kW-hr
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2
567 IAC 23.1(2)"yyy"
40 CFR 60 Subpart III

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 0.22 tons/yr⁽¹⁾, 0.4 g/kW-hr
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 6.01 lb/hr, 1.20 tons/yr⁽¹⁾, 3.5 g/kW-hr
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2
567 IAC 23.1(2)"yyy"
40 CFR 60 Subpart III

Pollutant: Carbon Dioxide (CO₂)
Emission Limit(s): 1.55 lb/kW-hr
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

Pollutant: Methane (CH₄)
Emission Limit(s): 1.22 x10⁻⁴ g/kW-hr
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

Pollutant: Carbon Dioxide Equivalents (CO₂e)
Emission Limit(s): 846 tons/yr⁽¹⁾
Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

⁽¹⁾ Standard is a combined twelve (12) month rolling total for EUs 403 (Emergency Generator 1) and 404 (Emergency Generator 2). The combined totals are based on an annual operating limit of 400 hours per year.

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. Emergency Generators 1 and 2 (EU-403 and EU-404) shall combust only diesel fuel.
- B. The owner or operator shall not operate EU-403 (Emergency Generator 1) and EU-404 (Emergency Generator 2) simultaneously.
- C. The combined total hours of operation for EU-403 (Emergency Generator 1) and EU-404 (Emergency Generator 2) shall not exceed 400 hours per rolling twelve (12) month period. The owner or operator shall record the following:
 - (1) Determine the annual combined hours of operation for EU 403 (Emergency Generator 1) and EU-404 (Emergency Generator 2) on a rolling twelve (12) month basis for each month of operation.
- D. In accordance with 40 CFR §60.4211(c), the owner or operator must comply with the required NSPS emissions standards by purchasing engines certified by their manufacturer to meet the applicable emission standards for the same model year and engine power. The engines shall be installed and configured to the manufacturer's specifications. Provided these requirements are satisfied, no further demonstration of compliance with the emission standards from 40 CFR §60.4205(b) and 40 CFR §60.4202(b)(2) is required. However, if the engines are not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, compliance demonstrations are required in accordance with 40 CFR §60.4211(g).
- E. Emergency Generators 1 and 2 (EU-403 and EU-404) are limited to the following operation:
 - (1) They are limited to operation as emergency stationary internal combustion engines as defined in 40 CFR §60.4219 and in accordance with 40 CFR §60.4211. There is no time limit on the use of the engines in emergency situations provided that the annual hourly limit established in Condition C. is not exceeded. In accordance with 40 CFR §60.4211, they are limited to operating a maximum of one hundred (100) hours per year for maintenance checks and readiness testing.
 - (2) They are also allowed to operate up to fifty (50) hours per year in non-emergency situations, but the fifty (50) hours are counted toward the one hundred (100) hours provided for maintenance and testing. The fifty (50) hours per year for non-emergency operation cannot be used to generate income for the facility to supply power to the electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. It is not allowed to operate as a peak shaving unit.
- F. In accordance with 40 CFR §60.4207(b), the diesel fuel oil burned in Emergency Generators 1 and 2 (EU-403 and EU-404) shall meet the following specifications from 40 CFR 1090.305 for nonroad diesel fuel:
 - (1) a maximum sulfur content of 15 ppm (0.0015%) by weight; and

- (2) a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.
- G. The owner or operators of Emergency Generators 1 and 2 (EU-403 and EU-404) shall comply with the requirements of Condition F listed above by one of the following methods:
- (1) have the fuel supplier certify that the fuel delivered meets the definition of non-road diesel fuel as defined in 40 CFR 1090.305;
 - (2) obtain a fuel analysis from the supplier showing the sulfur content and cetane index or aromatic content of the fuel delivered; or
 - (3) perform an analysis of the fuel to determine the sulfur content and cetane index or aromatic content of the fuel received.
- H. In accordance with 40 CFR §60.4209(a), Emergency Generators 1 and 2 (EU-403 and EU-404) shall be equipped with a non-resettable hour meters.
- I. Emergency Generators 1 and 2 (EU-403 and EU-404) shall be installed and configured according to the manufacturer's emission related specifications, except as permitted in §60.4211(g).
- J. In accordance with §60.4211(a), Emergency Generators 1 and 2 (EU-403 and EU-404) shall be operated and maintained in accordance with the manufacturer's emission-related written instructions. The owner or operator may only change emission-related engine settings that are permitted by the manufacturer.
- K. The owner or operator shall maintain the following monthly records to demonstrate compliance with NSPS Subpart IIII requirements:
- (1) the number of hours that Emergency Generators 1 and 2 (EU-403 and EU-404) operated for maintenance checks and readiness testing;
 - (2) the number of hours that Emergency Generators 1 and 2 (EU-403 and EU-404) operated for allowed non-emergency operations;
 - (3) the total number of hours that Emergency Generators 1 and 2 (EU-403 and EU-404) operated; and
 - (4) the rolling 12-month total amount of the number of hours that Emergency Generators 1 and 2 (EU-403 and EU-404) operated
- L. The owner or operator shall maintain the following annual records to demonstrate compliance with NSPS Subpart IIII requirements:
- (1) the number of hours that Emergency Generators 1 and 2 (EU-403 and EU-404)) operated for maintenance checks and readiness testing; and
 - (2) the number of hours that Emergency Generators 1 and 2 (EU-403 and EU-404) operated for allowed non-emergency operations.
- M. The owner or operator shall complete all applicable recordkeeping and monitoring as required by NSPS Subpart IIII not specifically listed in this permit:
- (1) The owner or operator of the engine shall follow the monitoring requirements of 40 CFR§60.4209.
 - (2) The owner or operator of the engine shall follow the compliance requirements of 40

CFR§60.4211.

- (3) The owner or operator of the engine shall follow the notification, reporting, and recordkeeping requirements of 40 CFR§60.4214(b).

N. The following work practices for startup, shutdown, and malfunction (SSM) operations shall be followed:

(1) Startup:

Startup of Emergency Generators 1 and 2 (EU-403 and EU-404) from cold conditions begins with firing of ULSD in the engine. The engines startup period is expected to be up to thirty (30) minutes in duration. During startup, target parameters such as engine coolant temperature, oil temperature/pressure, exhaust temperature, and generator load readings are variable and monitored closely. The SCR (CE-403 and CE-404) are turned on at 480 °F (approximately 10-20 minutes after startup). The startup periods ends when the coolant temperatures reach 70 °F.

(2) Shutdown:

The shutdown period begins when the diesel fuel feed is reduced and the Emergency Generators 1 and 2 (EU-403 and EU-404) are taken down to approximately 50 kW (load is reduced 10 – 25 kW/s). The engines are cooled for a minute before the generators are taken offline. Cooling occurs for another five (5) minutes before all fuel flow and urea injection is ceased. The SCR are operational during all shutdown periods when the engines are running as long as the SCR catalyst bed outlet temperature remains above 480 °F.

(3) Malfunction:

During malfunction, the work practice standards shall be followed for the emission unit and its air pollution control equipment as stated in 567 IAC 24.1(4).

O. The owner or operator shall utilize the SCR electronic control systems to determine the proper urea injection rate into the SCR (CE-403 and CE-404).

P. The SCR (CE-403 and CE-404) shall be maintained and the catalysts shall be replaced according to the manufacturer's specifications.

Q. Logs of all maintenance and inspection activities performed on the SCR (CE-403 and CE-404). These logs shall include, but is not necessarily limited to:

- The dates and times any inspection and/or maintenance was performed on the SCR (CE-403 and CE-404);
- Any issues identified during the inspections;
- Any issues addressed during the maintenance activities;
- The recommended dates of catalyst replacements,
- The actual dates of catalyst replacements;

R. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e. a "*Work Practices Manual*") for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.

- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department's approval of the proposed changes

Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2
567 IAC 23.1(2) "yyy"
40 CFR 60 Subpart III

NSPS and NESHAP Applicability

These emission units are subject to the New Source Performance Standard (NSPS) Subpart III – Standards for Performance for Stationary Compression Ignition Internal Combustion Engines, and Subpart A – General Provisions.

Authority for Requirements: 40 CFR 60 Subpart III
567 IAC 23.1(2)"yyy"

These emission units are subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines and Subpart A: General Provisions.

In accordance with 40 CFR §63.6590(b), the engines do not have to meet the requirements of NESHAP Subpart ZZZZ and NESHAP Subpart A except for the initial notification requirements of 40 CFR §63.6645(f) since the engines are new reciprocating internal combustion engines located at a major source of hazardous air pollutants (HAP) and are rated at more than 500 horsepower (HP).

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

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height, (ft., from the ground): 18.4

Stack Opening, (inches, dia.): 18

Exhaust Flow Rate (scfm): 7,500

Exhaust Temperature (°F): 915

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permits 13-A-238-P2 & 13-A-239-P2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall

submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: Diesel Belly Tanks 1 and 2

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material/Fuel	Rated Capacity	Construction Permit
EP-405	EU-405	Diesel Belly Tank 1	Diesel	1,645 gallons 173.5 gal/hr	13-A-240-P1
EP-406	EU-406	Diesel Belly Tank 2		1,645 gallons 173.5 gal/hr	13-A-241-P1

Applicable Requirements

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

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

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.1 tons/yr

Authority for Requirement: DNR Construction Permit 13-A-240-P1, 13-A-241-P1

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. These emission units (EU-405 and EU-406) shall store only diesel fuel.
- B. Determine the cumulative amount of VOC emitted from each emission point (EP-405 and EP-406) on a rolling-12-month basis for each month of operation.

Authority for Requirement: DNR Construction Permits 13-A-240-P1 & 13-A-241-P1

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height, (ft., from the ground): 14.4

Stack Opening, (inches, dia.): 3

Exhaust Flow Rate (scfm): Displacement

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Obstructed

Authority for Requirement: DNR Construction Permits 13-A-240-P1 & 13-A-241-P1

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: Silos

Associated Equipment

Emission Points	Emission Units	Emission Unit Descriptions	Raw Materials/Fuels	Control Equipment	Rated Capacities	Construction Permits
EP-407	EU-407	Hydrated Lime Silo	Lime	Bin Vent Filter (CE-407)	8,800 ft ³	14-A-403-P1
					1,008 lb/hr (unloading)	
					33,333 lb/hr (loading)	
EP-408	EU-408	Soda Ash Silo	Soda Ash	Bin Vent Filter (CE-408)	2,600 ft ³	14-A-404-P1
					520 lb/hr (unloading)	
					33,333 lb/hr (loading)	

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): No Visible Emissions

Authority for Requirement: DNR Construction Permits 14-A-403-P1 & 14-0A-404-P1

Pollutant: PM_{2.5}

Emission Limit(s): 0.064 lb/hr, 0.002 gr/dscf

Authority for Requirement: DNR Construction Permits 14-A-403-P1 & 14-0A-404-P1

Pollutant: PM₁₀

Emission Limit(s): 0.064 lb/hr, 0.005 gr/dscf

Authority for Requirement: DNR Construction Permits 14-A-403-P1 & 14-0A-404-P1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf, 0.005 gr/dscf

Authority for Requirement: DNR Construction Permits 14-A-403-P1 & 14-0A-404-P1
567 IAC 23.3(2)"a"

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

A. The owner or operator shall inspect and maintain the control equipment (CE-407 and CE-408) in accordance with manufacturer’s specifications. The owner or operator shall keep a log of:

- (1) All inspections/maintenance of the control equipment (CE-407 and CE-408) and
- (2) Any action resulting from the inspections/maintenance of the control equipment (CE-407 and CE-408)

Authority for Requirement: DNR Construction Permits 14-A-403-P1 & 14-A-404-P1

Emission Point Characteristics

The emission points shall conform to the specifications listed below.

Emission Points	Stack Heights (ft from ground)	Stack Openings (inches)	Exhaust Flow Rates (scfm)	Exhaust Temps. (°F)	Discharge Style	Authority for Requirement (DNR Construction Permits)
EP-407	86	22 x 36	1,500	Ambient	Downward	14-A-403-P1
EP-408	44	22 x 36	1,500	Ambient	Downward	14-A-404-P1

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Opacity:

Observation for the presence of visible emissions shall be conducted on a weekly basis while raw material is being transferred to ensure no visible emissions are occurring. If visible emissions are observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake visible emissions readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Maintain a written record of the observation and any action resulting from the observation for a minimum of five years.

Authority for Requirement: 567 IAC 22.108(3)

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: EP-409

Associated Equipment

Associated Emission Unit ID Numbers: EU-409

Emission Unit vented through this Emission Point: EP- 409
Emission Unit Description: North Administration Building Emergency Generator
Raw Material/Fuel: Natural Gas
Rated Capacity: 70 bhp, 519 cubic feet/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(s): No Visible Emissions

Authority for Requirement: DNR Construction Permit 15-A-582-P2

Pollutant: PM_{2.5}

Emission Limit(s): 0.00525 lb/hr, 6.56×10^{-4} tons/yr, 7.49×10^{-5} lb/hp-hr

Authority for Requirement: DNR Construction Permit 15-A-582-P2

Pollutant: PM₁₀

Emission Limit(s): 0.00525 lb/hr, 6.56×10^{-4} tons/yr, 7.49×10^{-5} lb/hp-hr

Authority for Requirement: DNR Construction Permit 15-A-582-P2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf, 6.56×10^{-4} tons/yr, 7.49×10^{-5} lb/hp-hr

Authority for Requirement: DNR Construction Permit 15-A-582-P2
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: DNR Construction Permit 15-A-582-P2
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.78 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-582-P2

Pollutant: Nitrogen Oxides (NO_x) + Hydrocarbons (HC)
Emission Limit(s): 10 g/hp-hr
Authority for Requirement: DNR Construction Permit 15-A-582-P2
567 IAC 23.1(2)"zzz"
40 CFR 60 Subpart JJJJ

Pollutant: Nitrous Oxides (N₂O)
Emission Limit(s): 1.67 x 10⁻⁶ lb/hp-hr
Authority for Requirement: DNR Construction Permit 15-A-582-P2
567 IAC 23.1(2)"zzz"
40 CFR 60 Subpart JJJJ

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 0.01 tons/yr, 1.0 g/bhp-hr
Authority for Requirement: DNR Construction Permit 15-A-582-P2

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 6.08 lb/hr, 0.76 tons/yr, 387 g/hp-hr
Authority for Requirement: DNR Construction Permit 15-A-582-P2
567 IAC 23.1(2)"zzz"
40 CFR 60 Subpart JJJJ

Pollutant: Carbon Dioxide (CO₂)
Emission Limit(s): 0.90 lb/hp-hr
Authority for Requirement: DNR Construction Permit 15-A-582-P2

Pollutant: Methane (CH₄)
Emission Limit(s): 0.0095 lb/hp-hr
Authority for Requirement: DNR Construction Permit 15-A-582-P2

Pollutant: Carbon Dioxide Equivalents (CO₂e)
Emission Limit(s): 10.0 tons/yr
Authority for Requirement: DNR Construction Permit 15-A-582-P2

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. The North Administration Building Emergency Generator (EU-409) shall combust only natural gas.
- B. The North Administration Building Emergency Generator (EU-409) shall not operate more than 250 hours per rolling twelve (12) month period. The owner or operator shall record the following:

- (1) Determine the annual hours of operation for this emission unit on a rolling twelve (12) month basis for each month of operation.
- C. The North Administration Building Emergency Generator (EU-409) is limited to the following operations:
- (1) It is limited to operation as an emergency stationary internal combustion engine as defined in 40 CFR §60.4248 and in accordance with 40 CFR §60.4243. There is no time limit on the use of the engine in emergency situations provided that the annual hourly limit established in Condition B. is not exceeded. In accordance with 40 CFR §60.4243, it is limited to operate a maximum of one hundred (100) hours per year for maintenance checks and readiness testing.
 - (2) It is also allowed to operate up to fifty (50) hours per year in non-emergency situations, but the fifty (50) hours are counted toward the one hundred (100) hours provided for maintenance and testing. The fifty (50) hours per year for non-emergency operation cannot be used to generate income for the facility to supply power to the electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. It is not allowed to operate as a peak shaving unit.
- D. In accordance with 40 CFR§60.4243(e), the owner or operator may operate the North Administration Building Emergency Generator (EU-409) using propane for a maximum of one hundred (100) hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than one hundred (100) hours per year and the North Administration Building Emergency Generator (EU-409) is not certified to the emission standards when using propane, the owner or operator is required to conduct a performance test to demonstrate compliance with the emission standards of 40 CFR §60.4233.
- E. In accordance with 40 CFR §60.4237(c), the North Administration Building Emergency Generator (EU-409) shall be equipped with a non-resettable hour meter.
- F. The owner or operator shall maintain the following monthly records for the North Administration Building Emergency Generator (EU-409):
- (1) the number of hours it operated for maintenance checks and readiness testing;
 - (2) the number of hours it operated for allowed non-emergency operations;
 - (3) the total number of hours it operated; and
 - (4) the rolling 12-month total amount of the number of hours it operated.
- G. The owner or operator shall maintain the following annual records for the North Administration Building Emergency Generator (EU-409):
- (1) the number of hours it operated for maintenance checks and readiness testing; and
 - (2) the number of hours the engine operated for allowed non-emergency operations.
- H. The North Administration Building Emergency Generator (EU-409) shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4243(b) and §60.4243(a)(2).
- I. In accordance with §60.4243(b) and §60.4243(a)(1), the North Administration Building

Emergency Generator (EU-409) shall be operated and maintained in accordance with the manufacturer's emission-related written instructions. The owner or operator may only change emission-related engine settings that are permitted by the manufacturer.

- J. The owner or operator shall meet all applicable compliance requirements per 40 CFR§60.4243 not specifically listed in this permit.
- K. In accordance with 40 CFR§60.4245(a), the owner or operator shall keep records of the following information regarding the North Administration Building Emergency Generator (EU-409):
 - (1) All notifications submitted to comply with NSPS Subpart JJJJ and all documentation supporting any notification.
 - (2) Maintenance conducted on the engine.
 - (3) Documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 1048, 1054, and 1060, as applicable.
- L. The owner or operator shall follow all other applicable notification, reporting, and recordkeeping requirements of 40 CFR§60.4245.
- M. For GHG emissions, the owner or operator shall:
 - (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e. a "*Work Practices Manual*") for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
 - (2) Implement the practices contained within the *Work Practices Manual*.
 - (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department's approval of the proposed changes

Authority for Requirement: DNR Construction Permit 15-A-582-P2
567 IAC 23.1(2)"zzz"
40 CFR 60 Subpart JJJJ

NSPS and NESHAP Applicability

This emission unit is subject to the New Source Performance Standard (NSPS) Subpart JJJJ – Standards for Performance for Stationary Spark Ignition Internal Combustion Engines, and Subpart A – General Provisions.

Authority for Requirements: 40 CFR 60 Subpart JJJJ
567 IAC 23.1(2)"zzz"

The emergency engine is subject to 40 CFR Part 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(2)(ii), this spark ignition emergency engine, located at a major source, is a new stationary RICE as it was constructed on or after June 12, 2006.

According to 40 CFR 63.6590(c)(6), this emergency engine must meet the requirements of subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ for spark ignition engines. No further requirements apply for this engine under subpart ZZZZ.

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

Emission Point Characteristics

The emission points shall conform to the specifications listed below.

Stack Height, (ft., from the ground): 3.75
Stack Opening, (inches): 26.75 x 18.5
Exhaust Flow Rate (scfm): 100
Exhaust Temperature (°F): 1,180
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 15-A-582-P2

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: Fire Pumps

Associated Equipment

Emission Points	Emission Units	Emission Unit Descriptions	Raw Materials/Fuels	Rated Capacities	Construction Permits
EP-410	EU-410	Fire Pump Emergency Engine 1	Diesel	470.4 bhp	15-A-583-P1
				25.6 gal/hr	
EP-411	EU-411	Fire Pump Emergency Engine 2	Diesel	471.8 bhp	15-A-584-P1
				25.6 gal/hr	

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 5% Normal Operation

20% Start-up, Shut-down, Malfunction, or Acceleration Mode

Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: PM_{2.5}

Emission Limit(s): 0.14 lb/hr, 0.04 tons/yr⁽¹⁾, 0.20 g/kW-hr

Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: PM₁₀

Emission Limit(s): 0.14 lb/hr, 0.04 tons/yr⁽¹⁾, 0.20 g/kW-hr

Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: Particulate Matter (PM) Federal

Emission Limit(s): 0.20 g/kW-hr

Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1
567 IAC 23.1(2)"yyy"
40 CFR 60 Subpart III

Pollutant: Particulate Matter (PM) State
Emission Limit(s): 0.1 gr/dscf, 0.04 tons/yr⁽¹⁾, 0.20 g/kW-hr
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1
567 IAC 23.3(3)"b"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 2.61 lb/hr
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: Nitrogen Oxides (NO_x) + Non-Methane Hydrocarbons (NMHC)
Emission Limit(s): 4.0 g/kW-hr
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1
567 IAC 23.1(2)"yyy"
40 CFR 60 Subpart III

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 0.04 tons/yr⁽¹⁾, 0.25 g/kW-hr
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 0.56 lb/hr, 0.14 tons/yr⁽¹⁾, 3.5 g/kW-hr
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: Carbon Dioxide (CO₂)
Emission Limit(s): 1.55 lb/kW-hr
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: Methane (CH₄)
Emission Limit(s): 1.22 x10⁻⁴ g/kW-hr
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

Pollutant: Carbon Dioxide Equivalents (CO₂e)
Emission Limit(s): 136 tons/yr⁽¹⁾
Authority for Requirement: DNR Construction Permits 15-A-583-P1 & 15-A-584-P1

⁽¹⁾Standard is a combined twelve (12) month rolling total for EUs 410 (Fire Pump #1) and 411 (Fire Pump #2). The combined totals are based on an annual operating limit of 500 hours per year.

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. Fire Pumps #1 and #2 (EUs 410 and 411) shall combust only diesel fuel.
- B. The combined total hours of operation for Fire Pump #1 (EU-410) and Fire Pump #2 (EU-411) shall not exceed 500 hours per rolling twelve (12) month period. The owner or operator shall record the following:
 - (1) Determine the annual combined hours of operation for Fire Pump #1 (EU-410) and Fire Pump #2 (EU-411) on a rolling twelve (12) month basis for each month of operation.
- C. In accordance with 40 CFR §60.4211(c), the owner or operator must comply with the required NSPS emissions standards by purchasing an engine certified by its manufacturer to meet the applicable emission standards for the same model year and engine power. The engine shall be installed and configured to the manufacturer's specifications. Provided these requirements are satisfied, no further demonstration of compliance with the emission standards for fire pump engines from 40 CFR §60.4205(c) as applicable is required. However, if the engine is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, a compliance demonstration is required in accordance with 40 CFR §60.4211(g).
- D. Fire Pumps #1 and #2 (EUs 410 and 411) are limited to the following operation:
 - (1) They are limited to operation as an emergency stationary internal combustion engine as defined in 40 CFR §60.4219 and in accordance with 40 CFR §60.4211. There is no time limit on the use of the engine in emergency situations provided that the annual hourly limit established in Condition B. is not exceeded. In accordance with 40 CFR §60.4211, they both are limited to operating a maximum of one hundred (100) hours per year for maintenance checks and readiness testing.
 - (2) They are each also allowed to operate up to fifty (50) hours per year in non-emergency situations, but the fifty (50) hours are counted toward the one hundred (100) hours provided for maintenance and testing. The fifty (50) hours per year for non-emergency operation cannot be used to generate income for the facility to supply power to the electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. It is not allowed to operate as a peak shaving unit.
- E. In accordance with 40 CFR §60.4207(b), the diesel fuel oil burned in Fire Pumps #1 and #2 (EUs 410 and 411) shall meet the following specifications from 40 CFR 1090.305 for nonroad diesel fuel:
 - (1) a maximum sulfur content of 15 ppm (0.0015%) by weight; and
 - (2) a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.

- F. The owner or operator of Fire Pumps #1 and #2 (EUs 410 and 411) shall comply with the requirements of Condition E. listed above by one of the following methods:
- (1) have the fuel supplier certify that the fuel delivered meets the definition of non-road diesel fuel as defined in 40 CFR 1090.305;
 - (2) obtain a fuel analysis from the supplier showing the sulfur content and cetane index or aromatic content of the fuel delivered; or
 - (3) perform an analysis of the fuel to determine the sulfur content and cetane index or aromatic content of the fuel received.
- G. In accordance with 40 CFR §60.4209(a), Fire Pumps #1 and #2 (EUs 410 and 411) shall be equipped with a non-resettable hour meter.
- H. Fire Pumps #1 and #2 (EUs 410 and 411) shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g).
- I. In accordance with §60.4211(a), Fire Pumps #1 and #2 (EUs 410 and 411) shall be operated and maintained in accordance with the manufacturer's emission-related written instructions. The owner or operator may only change emission-related engine settings that are permitted by the manufacturer.
- J. The owner or operator shall maintain the following monthly records to demonstrate compliance with NSPS Subpart IIII requirements:
- (1) the number of hours that Fire Pumps #1 and #2 (EUs 410 and 411) operated for maintenance checks and readiness testing;
 - (2) the number of hours that Fire Pumps #1 and #2 (EUs 410 and 411) operated for allowed non-emergency operations;
 - (3) the total number of hours that Fire Pumps #1 and #2 (EUs 410 and 411) operated; and
 - (4) the rolling 12-month total amount of the number of hours that Fire Pumps #1 and #2 (EUs 410 and 411) operated.
- K. The owner or operator shall maintain the following annual records to demonstrate compliance with NSPS Subpart IIII requirements:
- (1) the number of hours that Fire Pumps #1 and #2 (EUs 410 and 411) operated for maintenance checks and readiness testing; and
 - (2) the number of hours that Fire Pumps #1 and #2 (EUs 410 and 411) operated for allowed non-emergency operations.
- L. The owner or operator shall complete all applicable recordkeeping and monitoring as required by NSPS Subpart IIII not specifically listed in these permits:
- (1) The owner or operator of the engine shall follow the monitoring requirements of 40 CFR§60.4209.
 - (2) The owner or operator of the engine shall follow the compliance requirements of 40 CFR§60.4211.
 - (3) The owner or operator of the engine shall follow the notification, reporting, and recordkeeping requirements of 40 CFR§60.4214(b)

M. For GHG emissions, the owner or operator shall:

- (1) Keep a copy on-site of the required work practice manual documenting all efficiency practices and practices to reduce GHG emissions (i.e., a “*Work Practices Manual*”) for the Ammonia 2 and Urea 3 Plants and Supporting Utilities.
- (2) Implement the practices contained within the *Work Practices Manual*.
- (3) Revise the *Work Practices Manual* and submit the revisions to the Department as necessary to document any proposed efficiency changes. The revised *Work Practices Manual* shall be implemented upon the Department’s approval of the proposed change

Authority for Requirement: DNR Construction Permits 15-A-583-P1, 15-A-584-P1
 567 IAC 23.1(2) "yyy"
 40 CFR 60 Subpart III

NSPS and NESHAP Applicability

These emission units are subject to the New Source Performance Standard (NSPS) Subpart III – Standards for Performance for Stationary Compression Ignition Internal Combustion Engines, and Subpart A – General Provisions.

Authority for Requirements: 40 CFR 60 Subpart III
 567 IAC 23.1(2)"yyy"

These emission units are subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary and Subpart A: General Provisions.

In accordance with 40 CFR §63.6590(c)(6) and 40 CFR §63.6590(c)(7), these engines will meet the requirements of NESHAP Subpart ZZZZ by meeting the requirements of NSPS Subpart III. No further requirements apply to this engine under Subpart ZZZZ.

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

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Emission Points	Stack Heights (ft from ground)	Stack Openings (inches, dia)	Exhaust Flow Rates (scfm)	Exhaust Temps. (°F)	Discharge Style	Authority for Requirement (DNR Construction Permits)
EP-410	23	8	1,300	805	Vertical	15-A-583-P1
EP-411	23	8	1,200	805	Unobstructed	15-A-584-P1

The temperature and flowrate 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 either the

temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: Diesel Fire Pump Tanks

Associated Equipment

Emission Points	Emission Units	Emission Unit Descriptions	Raw Materials/Fuels	Rated Capacities	Construction Permits
EP-412	EU-412	Diesel Fire Pump Tank 1	Diesel	700 gal	15-A-585-P
				25.60 gal/hr	
EP-413	EU-413	Diesel Fire Pump Tank 2	Diesel	700 gal	15-A-586-P
				25.60 gal/hr	

Applicable Requirements

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

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

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.02 tons/yr

Authority for Requirement: DNR Construction Permit 15-A-585-P, 15-A-586-P

Operational Limits & Reporting/Record keeping Requirements

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

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. These emission units (EU 412 and 413) shall store only diesel fuel.
- B. Determine the cumulative amount of VOC emitted from each emission point (EP-412 and EP-413) on a rolling-12-month basis for each month of operation.

Authority for Requirement: DNR Construction Permits 15-A-585-P, 15-A-586-P

Emission Point Characteristics

The emission points shall conform to the specifications listed below.

Emission Points	Stack Heights (ft from ground)	Stack Openings (inches, dia)	Exhaust Flow Rates (scfm)	Exhaust Temps. (°F)	Discharge Style	Authority for Requirement (DNR Construction Permits)
EP-412	23	2	Displacement	70	Vertical	15-A-585-P
EP-413	23	2	Displacement	70	Unobstructed	15-A-586-P

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission points. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-650

Associated Equipment

Associated Emission Unit ID Numbers: EU-650

Emission Unit vented through this Emission Point: EU-650

Emission Unit Description: Caterpillar C15 ACERT (475 HP) Diesel Generator for
Non-emergency Air Compressor Service

Raw Material/Fuel: Diesel

Rated Capacity: 475 HP

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.

See NSPS and NESHAP Applicability section on the following page.

Operational Limits & Requirements

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

Operating Limits

- A. This engine is limited to burning diesel fuel oil only.
- B. This engine is limited to operating a maximum of 1000 hours in any rolling 12-month period.
- C. In accordance with §60.4207(b), the diesel fuel oil burned in this engine shall meet the following specifications from 40 CFR 1090.305 for non-road diesel fuel:
 - i. a maximum sulfur content of 15 ppm (0.0015%) by weight; and
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.
- D. The engine shall be equipped with a non-resettable hour meter.
- E. In accordance with §60.4211(a), this engine shall be operated and maintained in accordance with the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the manufacturer. The owner or operator may only change engine settings that are permitted by the manufacturer.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain the following monthly records:

- i. the total number of hours that the engine operated;
 - ii. the rolling 12-month total amount of the number of hours that the engine operated.
- B. The owner or operator of the engine shall comply with the requirements of Operating Limits paragraph C. listed above by one of the following methods:
 - i. have the fuel supplier certify that the fuel delivered meets the definition of non-road diesel fuel as defined in 40 CFR 1090.305;
 - ii. obtain a fuel analysis from the supplier showing the sulfur content and cetane index or aromatic content of the fuel delivered; or
 - iii. perform an analysis of the fuel to determine the sulfur content and cetane index or aromatic content of the fuel received.

Authority for Requirement: DNR Construction Permit 12-A-084

NSPS and NESHAP Applicability

This non-emergency engine is subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for *Stationary Reciprocating Internal Combustion Engines* (RICE). According to 40 CFR 63.6590(a)(2)(ii), this non-emergency engine, located at a major source, is a new stationary RICE as it was constructed on or after June 12, 2006.

According to 40 CFR 63.6590(c)(7), a new compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements of Part 63 by meeting the requirements of 40 CFR part 60 subpart IIII. No further requirements apply for this engine under Part 63.

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

This engine is subject to 40 CFR Part 60 NSPS Subpart III – Standards of Performance for *Stationary Compression Ignition Internal Combustion Engines* (IAC 23.1(2)“yyy”). The engine is a non-emergency stationary internal combustion engine.

1. In accordance with §60.4211(c), the engine must be certified by its manufacturer to comply with the emissions standards from §60.4205 (b) and §60.4202 (a)(2). The emission standards that the engine must be certified by the manufacturer to meet are:

Pollutant	Emission Standard	Basis
Particulate Matter (PM)	0.20 grams/kW-hr	§ 1039 Appendix I
NMHC ¹ + NO _x	4.0 grams/kW-hr	§ 1039 Appendix I
Carbon Monoxide (CO)	3.5 grams/kW-hr	§ 1039 Appendix I
Opacity acceleration mode	20%	§ 1039.105(b) (1)
Opacity lugging mode	15%	§ 1039.105(b) (2)
Opacity peaks in acceleration or lugging modes	50%	§ 1039.105(b) (3)

¹ Non-methane hydrocarbon

2. In accordance with §60.4211(c), the owner or operator must comply with the required NSPS emissions standards by purchasing an engine certified by its manufacturer to meet the applicable emission standards for the same model year and engine power. The engine must be installed and configured to the manufacturer’s specifications. Provided these requirements are satisfied, no further demonstration of compliance with the emission standards from §60.4205(b) and §60.4202(a)(2) is required.

Authority for Requirement: DNR Construction Permit 12-A-084
 40 CFR Part 60 Subpart III
 567 IAC 23.1(2)“yyy”

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 18
 Stack Opening, (inches, dia.): 6
 Exhaust Flow Rate (scfm): 725.3
 Exhaust Temperature (°F): 644
 Discharge Style: Vertical Unobstructed
 Authority for Requirement: DNR Construction Permit 12-A-084

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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: EP-651, EP-652, EP-653, EP-654

Associated Equipment

Associated Emission Unit ID Numbers: EU-651, EU-652, EU-653, EU-654

EU	Emission Unit Description	Raw Material/ Fuel	Rated Capacity (HP)	Construction Date
EU-651	Generac SD080 Generator	Diesel	128	11/30/1995
EU-652	Generac SD150 Generator		310	04/02/1996
EU-653	Caterpillar Fire Water Pump B		231	08/16/1995
EU-654	Caterpillar Fire Water Pump A		215	03/07/1975

All engines listed are emergency engines.

All engine listed are exempt from construction permitting since the rated capacities are less than 400 HP.

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 (PM)

Emission Limit(s): 0.1 gr/dscf

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 2.5 lb/MMBtu

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

Operational Limits & Requirements

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

Operating Limits

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 and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

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)

NSPS and NESHAP Applicability

These emergency engines are subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(1)(ii), these compression ignition emergency engines, located at a major source, are existing stationary RICE as they were constructed prior to June 12, 2006.

Compliance Date

Per 63.6595(a)(1), you must comply with the provisions of Subpart ZZZZ that are applicable by May 3, 2013.

Fuel Requirements

No requirements except (beginning January 1, 2015) if you own or operate an existing emergency compression ignition stationary engine with a site rating of more than 100 bhp and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates for the purposes specified in 40 CFR 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. Those requirements include a maximum sulfur content of 15 ppm (0.0015%) by weight and a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume. 40 CFR 63.6604(b)

Operation and Maintenance Requirements 40 CFR 63.6602, 63.6625, 63.6640 and Tables 2c and 6 to Subpart ZZZZ

1. Change oil and filter every 500 hours of operation or annually, whichever comes first. (See 63.6625(i) for the oil analysis option to extend time frame of requirements.)
2. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary.
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
4. Operate and maintain the stationary RICE and after-treatment control device (if any) 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.
5. Install a non-resettable hour meter if one is not already installed.

6. 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.

Operating Limits 40 CFR 63.6640(f)

1. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations (*up to*) 50 hours per year is prohibited.
2. There is no time limit on the use of emergency stationary RICE in emergency situations.
3. You may operate your emergency stationary RICE up to 100 combined hours per calendar year for maintenance checks and readiness testing. See 40 CFR 63.6640(f)(2) for additional information and restrictions.
4. You may operate your emergency stationary RICE up to 50 hours per calendar year for non-emergency situations, but those 50 hours are counted toward the 100 hours of maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Recordkeeping Requirements 40 CFR 63.6655

1. Keep records of the maintenance conducted on the stationary RICE.
2. Keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. See 40 CFR 63.6655(f) for additional information.

Notification and Reporting Requirements 40 CFR 63.6645, 63.6650 and Table 2c to Subpart ZZZZ

1. An initial notification is not required per 40 CFR 63.6645(a)(5).
2. A report may be required for failure to perform the work practice requirements on the schedule required in Table 2c. (See Footnote 1 of Table 2c for more information.)

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

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: EP-656

Associated Equipment

Associated Emission Unit ID Numbers: EU-656

EU	Emission Unit Description	Raw Material/ Fuel	Rated Capacity (HP)	Construction Date
EU-656	Generac SG060 South Admin Building Generator	Natural Gas	96.7	July 2015

Engine is an emergency engine.

Engine is exempt from construction permitting since the rated capacity is less than 400 HP.

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 (PM)

Emission Limit(s): 0.1 gr/dscf

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 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.

NSPS and NESHAP Applicability

This emission unit is subject to the New Source Performance Standard (NSPS) Subpart JJJJ – Standards for Performance for Stationary Spark Ignition Internal Combustion Engines, and Subpart A – General Provisions.

Authority for Requirements: 40 CFR 60 Subpart JJJJ
567 IAC 23.1(2)"zzz"

This emergency engine is subject to 40 CFR Part 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(2)(ii), this spark ignition emergency engine, located at a major source, is a new stationary RICE as it was constructed on or after June 12, 2006.

According to 40 CFR 63.6590(c)(6), this emergency engine must meet the requirements of subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ for spark ignition engines. No further requirements apply for this engine under subpart ZZZZ.

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

NSPS Subpart JJJJ Requirements

Emission Standards:

(40 CFR 60.4233(d) and Table 1 to Subpart JJJJ)

Maximum Engine Power	Manufacture Date	Emission Standards ⁽¹⁾						
		g/HP-hr				ppmvd at 15% O ₂		
		NO _x	HC + NO _x	CO	VOC ⁽²⁾	NO _x	CO	VOC
25 < HP < 130	1/1/2009+	N/A	10	387	N/A	N/A	N/A	N/A

⁽¹⁾ Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

⁽²⁾ Formaldehyde emissions are not included.

Compliance Demonstrations:

1. You must demonstrate compliance with the emission standards by the following method (40 CFR 60.4243(b)):
 - Purchasing a certified engine that complies with the emission standards.
2. Owners and operators of SI engines that are required to be certified and who operate and maintain the engine according to the manufacturer's written instructions must keep records of required maintenance. 40 CFR 60.4243(b)(1), 4243(a), and 4245(a)(2).
3. Owners and operators of natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, a performance test must be conducted to demonstrate compliance with the emission standards. 40 CFR 60.4243(e).
4. If you are an owner or operator of engine \leq 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing, but you are not required to conduct subsequent performance testing unless the engine is rebuilt or undergoes major repair or maintenance. 40 CFR 60.4243(f).
5. Owners and operators of certified engines must keep a record from the manufacturer that the engines are certified to meet applicable emission standards. 40 CFR 60.4245(a)(3).

Operating and Recordkeeping Requirements (40 CFR 4243(d))

1. Owners and operators of the following emergency SI engines that do not meet the applicable standards for non-emergency engines must install a non-resettable hour meter. 40 CFR 60.4237.

Maximum Engine Power	Engine Was Built On Or After
HP < 130	7/1/2008

2. The engine may be operated for the purpose of maintenance checks and readiness testing a maximum of 100 hours/year. There is no time limit on use for emergency situations.
3. The engine may be operated for up to 50 hours per year for non-emergency purposes. This operating time cannot be used to generate income for the facility (e.g. supplying power to the grid) and should be included in the total of 100 hours allowed for maintenance checks and readiness testing.
4. Owners and operators of an emergency engine must keep records of all operation of the engine. The owner must record the date and time of operation of the engine and the reason the engine was in operation.
5. Owners and operators of the following emergency SI that does not meet the applicable standards for a non-emergency engine must keep the following records. 40 CFR 60.4245(b).

Maximum Engine Power	Manufactured On Or After	Recordkeeping Requirement
25 < HP < 130	7/1/2008	Hours of operation recorded through a non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

Authority for Requirement: 40 CFR Part 60 Subpart JJJJ
567 IAC 23.1(2)"zzz"

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"*
6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. *567 IAC 22.108(15)"c"*

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source's right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). *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 submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, Wallace State Office Building, 502 E 9th St., Des Moines, IA 50319-0034, 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 U.S. EPA Region VII, Attention: Chief of Air Permitting & Standards Branch, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. 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 emissions inventory shall be submitted annually by March 31 with forms specified by the department documenting actual emissions for the previous calendar year.
4. The fee shall be submitted annually by July 1 with forms specified by the department.
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) 725-8694 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. A variance from this subrule may be available as provided for in Iowa Code section 455B.143. 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. Initial 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 initial 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 initial report may be made by electronic mail (E-mail), 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 initial 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 situation 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 fulfills the requirement of paragraph 22.108(5)"b." – See G15. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or upset provision contained in any applicable requirement. *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 (revisions affecting Title IV permitting are addressed in rules 567—22.140(455B) through 567 - 22.144(455B));
 - e. The changes comply with all applicable requirements.
 - f. For each such 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 does 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 Title V Permit Modification.

- a. Minor Title V permit modification procedures may be used only for those permit modifications that satisfy all of the following:
 - i. Do not violate any applicable requirement;
 - 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 an 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 under rule 567 - 22.113(455B).
- 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 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, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

3. Significant Title V 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, as those requirements that apply to Title V issuance and renewal.

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 22.111-567 IAC 22.113*

G19. Duty to Obtain Construction Permits

Unless exempted in 567 IAC 22.1(2) or to meet the parameters established in 567 IAC 22.1(1)"c", the permittee shall not construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, or conditional permit, or permit pursuant to rule 567 IAC 22.8, or permits required pursuant to rules 567 IAC 22.4, 567 IAC 22.5, 567 IAC 31.3, and 567 IAC 33.3 as required in 567 IAC 22.1(1). A permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon. *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 (*567 IAC 23.1(3)"a"*); training fires and controlled burning of a demolished building (*567 IAC 23.2*).

G21. Open Burning

The permittee is prohibited from conducting open burning, except as provided in 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"j"; 567 IAC 23.2(3)"j" - 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 or greenhouse gas generating substances 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 affect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

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 consistent with the requirements of *567 IAC 22.111(1)*. *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. 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. If the owner or operator does not provide timely notice to the department, the department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with applicable rules or permit conditions. Upon written request, the department may allow a notification period of less than 30 days. At the department's request, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance demonstration. 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
Wallace State Office Building
502 E 9th St.
Des Moines, IA 50319-0034
(515) 725-9545

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:

Iowa Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA Region 7
11201 Renner Blvd.
Lenexa, KS 66219
(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
Wallace State Office Building
502 E 9th St.
Des Moines, IA 50319-0034
(515) 725-8200

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

1101 Commercial Court, Suite 10
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

Wallace State Office Building
502 E 9th St.
Des Moines, IA 50319-0034
(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

Air Quality Branch
1020 6th Street SE
Cedar Rapids, IA 52401
(319) 892-6000

V. Appendix

- A. 40 CFR 60 Subpart A – *General Provisions*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-A>
- B. 40 CFR 60 Subpart Dc – Standards of Performance for *Small Industrial-Commercial-Institutional Steam Generating Units*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-Dc>
- C. 40 CFR 60 Subpart Db – Standards of Performance for *Small Industrial-Commercial-Institutional Steam Generating Units*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-Db>
- D. 40 CFR 60 Subpart G – Standards of Performance for *Nitric Acid Plants*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-G>
- E. 40 CFR 60 Subpart Ga – Standards of Performance for *Nitric Acid Plants for which Construction, Reconstruction or Modification Commenced after October 14, 2011*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-Ga>
- F. 40 CFR 60 Subpart IIII – Standards of Performance for *Stationary Compression Ignition Internal Combustion Engines*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-IIII>
- G. 40 CFR 60 Subpart JJJJ – Standards of Performance for *Stationary Spark Ignition Internal Combustion Engines*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-JJJJ>
- H. 40 CFR 60 Subpart VVa – Standards of Performance for *Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006.*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-VVa>
- I. 40 CFR 63 Subpart A – *General Provisions*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-A>
- J. 40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for *Stationary Reciprocating Internal Combustion Engines*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-ZZZZ>
- K. 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants For *Industrial, Commercial, And Institutional Boilers And Process Heaters*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-DDDDD>
- L. 40 CFR Part 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for *Miscellaneous Organic Chemical Manufacturing*
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-FFFF>