

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

Name of Permitted Facility: Koch Fertilizer Ft. Dodge, LLC
Facility Location: 3162 200th St., Duncombe, IA 50532
Air Quality Operating Permit Number: 00-TV-010R3
Expiration Date: October 21, 2021
Permit Renewal Application Deadline: April 20, 2021

EIQ Number: 92-1932
Facility File Number: 94-01-005

Responsible Official

Name: Mr. Michael J. Kleis
Title: Plant Manager
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Permit Contact Person for the Facility

Name: Mr. Shawn Kerrick
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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



Lori Hanson, Supervisor of Air Operating Permits Section

10/21/16

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
IAC.....	Iowa Administrative Code
DNR	Iowa Department of Natural Resources
MVAC.....	motor vehicle air conditioner
NAICS.....	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NSPS.....	new source performance standard
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 _{2.5}	particulate matter two and one half microns or less in diameter
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: Koch Fertilizer Ft. Dodge, LLC

Permit Number: 00-TV-010R3

Facility Description: Nitrogenous Fertilizer (SIC 2873)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit Number
EP-01	EU-01A	Ammonia Vapor Flare	95-A-211-S3
	EU-01B	Ammonia Flare Burner	
EP-02	EU-02	CO ₂ Regenerator	95-A-213-S1
EP-11	EU-03	Condensate Stripper	
EP-04	EU-05A	Primary Reformer	95-A-214-P4
	EU-05B	Primary Reformer	
	EU-06A	Auxiliary Boiler	
EP-05	EU-07	Desulfurizer Absorbent Reduction	95-A-215-S2
EP-06	EU-08	High Temperature Shift Vent	95-A-216-S3
	EU-09	Low Temperature Shift/Short Shift Vent	
EP-07	EU-10	Lime Silo	NA
EP-08	EU-11	Natural Gas Start-up Heater	11-A-463
EP-12	EU-14	North Murray Boiler	NA
EP-13	EU-15	South Murray Boiler	NA
EP-14	EU-16	Diesel Generator	98-A-746-S4
EP-18	EU-20	Ammonia Heater 2104-C	16-A-137
EP-21	EU-23	Nitric Acid Plant Tail Gas	96-A-580
EP-22	EU-24	Ammonium Nitrate Neutralizer Scrubber	96-A-581
EP-23	EU-25	Nitric Acid Working Loss	96-A-582
EP-37	EU-37	Administration Building Emergency Generator	NA
EP-38	EU-38	Ammonia 4 th Cell Cooling Tower	14-A-263
EP-39	EU-39	Ammonia 3-Cell Cooling Tower	14-A-575
EP-40	EU-40	Ammonia 5 th Cell Cooling Tower	14-A-576
EP-41	EU-41	UAN 2-Cell Cooling Tower	14-A-577

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
EU-12	MDEA Storage Tank (35,255 gallons)
EU-13	Diesel Tank (6,267 gallons)
EU-30	Fire Pump Gas Tank (Gasoline, 500 gallon)
EU-32	103-J Lube Oil Console (900 gallons)
EU-33	105-J Lube Oil Console (1,600 gallons)
EU-34	101-J Lube Oil Console (900 gallons)
EU-35	UAN Lube Oil Console (1,200gallons)
EU-42	105 JAX Lube Oil Storage
EU-43	105 JBX Lube Oil Storage
EU-44	101 JB Lube Oil Storage
SUE-BLDVENTS	Ventilation Fugitives
SUE-PGS	Process Gas Samples
SUE-HVFUG	EP-06 Fugitives

II. Plant-Wide Conditions

Facility Name: Koch Fertilizer Ft. Dodge, LLC
Permit Number: 00-TV-010R3

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

Permit Duration

The term of this permit is: Five (5) years from permit issuance date
Commencing on: October 21, 2016
Ending on: October 20, 2021

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 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"

NSPS

40 CFR 60 Subpart G Requirements

This facility is subject to Standards of Performance for Nitric Acid Plants. The affected unit is EP-21. Applicable requirements are incorporated in the Emission Point Specific conditions.

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

40 CFR 60 Subpart JJJJ Requirements

The Administration Building Emergency Generator (EP-37) is subject to Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

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

NESHAP

40 CFR 61 Subpart FF

The entire facility is subject to National Emission Standard for Benzene Waste Operations.

Authority for Requirements: 40 CFR 61 Subpart FF
567 IAC 23.1(3) "n"

40 CFR 63 Subpart ZZZZ Requirements

The Diesel Generator (EP-14) and the Administration Building Emergency Generator (EP-37) are subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP).

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

40 CFR 63 Subpart DDDDD Requirements

Emission units EP-04/EUA-05, EU-05B, and EU-06A, EP-08/EU-11, EP-12/EU-14, EP-13/EU-15 and EP-18/EU-20 are subject to National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

Authority for Requirements: 40 CFR 63 Subpart DDDDD

III. Emission Point-Specific Conditions

Facility Name: Koch Fertilizer Ft. Dodge, LLC

Permit Number: 00-TV-010R3

Emission Point ID Number: EP-01

Associated Equipment

Associated Emission Unit ID Numbers: See Table 1

Table 1:

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-01	EU-01A	Ammonia Vapor Flare Burner	Natural Gas	0.0121 MMCF/hr
	EU-01B	Ammonia Vapor Flare	Process Gas	3992 lbs/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-211-S3
567 IAC 23.3(2) "d"

⁽¹⁾ An exceedance of the indicator opacity of 10% 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): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 95-A-211-S3
567 IAC 23.3(2) "a"

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): 127.7 lb/hr

Authority for Requirement: DNR Construction Permit 95-A-211-S3

Operational Limits & Requirements

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

Operating Limits

- A. The fuel used in the flare's pilot shall be limited to natural gas.
- B. The flare shall be equipped with a pilot ignition system. The pilot ignition system shall be in operation at all times. The flare shall be operated and maintained in accordance with the recommendations of the manufacturer.

Authority for Requirement: DNR Construction Permit 95-A-211-S3

- C. Operational limit is intended to apply to the periods of time when the equipment connected to the flare is in operation, and there are either emissions to the flare or there is the potential for there to be emissions to the flare. If the equipment connected to the flare is not in operation (e.g. off-line, shutdown, down for maintenance), the pilot ignition system would not have to be in operation.

Authority for Requirement: 567 IAC 22.108(3)

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. Record the hourly flow rate of ammonia during each usage of this flare.
- B. Determine the hourly emissions of NO_x from this unit assuming that 2% of the nitrogen in the ammonia is converted to NO_x. The following equation should be used to make this calculation.

$$E = 0.02 \times \text{NH}_3 \times (46 \div 17)$$

Where:

E = the hourly emission rate of NO_x

NH₃ = hourly flow rate of ammonia to the flare.

Authority for Requirement: DNR Construction Permit 95-A-211-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 60

Stack Opening, (inches, dia.): 10.75

Exhaust Flow Rate (scfm): 8,900

Exhaust Temperature (°F): 1,450

Discharge Style: Vertical, Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-211-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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-02
Emission Unit Description: CO₂ Regenerator
Raw Material/Fuel: Process Gas
Rated Capacity: 50.0 ton/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): Total emissions from EP-02 and EP-11 shall not exceed 21.40 lb/hr; 93.92 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 95-A-213-S1

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): Total emissions from EP-02 and EP-11 shall not exceed 1.07 lb/hr; 4.71 ton/yr
Authority for Requirement: Iowa DNR Construction Permit 95-A-213-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 86
Stack Opening, (inches, dia.): 30
Exhaust Flow Rate (acfm): 25,985
Exhaust Temperature (°F): 178
Discharge Style: N/A
Authority for Requirement: Iowa DNR Construction Permit 95-A-213-S1

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

Monitoring Requirements

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

1. The permittee shall conduct quarterly grab samples using the methodology described below:

Sampling: 6-liter passivated stainless steel summa canister fitted with a bellows sealed stainless steel valve.
Analytical Method: 40 CFR 63, Appendix A, Method 308, SW-846^(*), Method 8015B, or other equivalent EPA-approved methods.
Detection Limit: < 0.1 ppm (methanol).

^(*) Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition, November 1986, as amended.

2. A grab sample shall be taken by January 31, April 30, July 31, and October 31 each year.
3. Analysis of the grab samples, along with a mass balance shall be calculated and used to demonstrate compliance with the VOC emission limits.
4. Maintain results of analysis and mass balance calculations for five years.

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 and EP-11

Associated Equipment

Associated Emission Unit ID Numbers: EU-03
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-02	EU-03	Condensate Stripper	Process Condensate	3,180 gal/hr
EP-11				

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): Total emissions from EP-02 and EP-11 shall not exceed 21.40 lb/hr; 93.92 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 95-A-213-S1

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): Total emissions from EP-02 and EP-11 shall not exceed 1.07 lb/hr; 4.71 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 95-A-213-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 86

Stack Opening, (inches, dia.): 30

Exhaust Flow Rate (acfm): 25,985

Exhaust Temperature (°F): 178

Discharge Style: N/A

Authority for Requirement: Iowa DNR Construction Permit 95-A-213-S1

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

Monitoring Requirements

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

See the monitoring requirements for EP02.

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: See Table 2
 Emissions Control Equipment ID Number: See Table 2
 Emissions Control Equipment Description: See Table 2

Table 2:

EP	EU	Emission Unit Description	Raw Material	Rated Capacity (MMBtu/hr)	Control Equipment	Construction Permit
EP-04	EU-05A	Primary Reformer	Natural Gas	550	N/A	95-A-214-P4
	EU-05B	Primary Reformer	Process Gas		N/A	
	EU-06A	Auxiliary Boiler	Natural Gas	240	CE-05 Flue Gas Recirculation	

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-214-P4
 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): 4.38 lb/hr

Authority for Requirement: DNR Construction Permit 95-A-214-P4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 4.38 lb/hr

Authority for Requirement: DNR Construction Permit 95-A-214-P4

Pollutant: Particulate Matter (PM) – EU-05A & EU-05B only

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 95-A-214-P4
 567 IAC 23.3(2)

Pollutant: Particulate Matter (PM) – *EU-06A only*
Emission Limit(s): 0.8 lb/MMBtu
Authority for Requirement: DNR Construction Permit 95-A-214-P4
567 IAC 23.3(2)

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 8.94 lb/hr; 500 ppmv
Authority for Requirement: DNR Construction Permit 95-A-214-P4
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 160.70 lb/hr; 0.06 lb/MMBtu ⁽²⁾
Authority for Requirement: DNR Construction Permit 95-A-214-P4

⁽²⁾This is a BACT limit, and is for auxiliary boiler only. Limit does not apply during boiler or plant startup.

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 3.42 lb/hr
Authority for Requirement: DNR Construction Permit 95-A-214-P4

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 52.00 lb/hr
Authority for Requirement: DNR Construction Permit 95-A-214-P4

Pollutant: Lead
Emission Limit(s): 0.11 lb/hr
Authority for Requirement: DNR Construction Permit 95-A-214-P4

Operational Limits & Requirements

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

Operating Limits

- A. The Primary Reformer (EU 05A/05B) shall only use natural gas and process gases.
- B. The Auxiliary Boiler (EU 06) shall only use natural gas, and process gases.
- C. The amount of ammonia produced by this facility (plant number 94-01-005) shall not exceed 401,500 tons per rolling twelve (12) month period.
- D. The Flue Gas Recirculation (FGR) system shall be operated whenever the ammonia plant is at steady-state operating conditions.

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 record the monthly amount of ammonia produced (in tons per month) at the facility (plant number 94-01-005).

B. The owner or operator shall record the rolling twelve (12) month total of ammonia produced (in tons per year) at the facility (plant number 94-01-005).

Authority for Requirement: DNR Construction Permit 95-A-214-P4

NESHAP

EU-05A (process heater), EU-05B (process heater), and EU-06A (boiler) are subject to National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63 Subpart DDDDD].

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): 127

Stack Opening, (inches, dia.): 146

Exhaust Flow Rate (scfm): 147,000

Exhaust Temperature (°F): 315

Discharge Style: Vertical, Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-214-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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-05

Associated Equipment

Associated Emission Unit ID Numbers: EU-07

Emission Unit vented through this Emission Point: EU-07
Emission Unit Description: Desulfurizer Absorbent Reduction
Raw Material/Fuel: Natural Gas
Rated Capacity: 1.108 MMCF/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-215-S2
567 IAC 23.3(2) "a"

⁽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 (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 95-A-215-S2
567 IAC 23.3(2) "d"

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 11.6 tons/yr
Authority for Requirement: DNR Construction Permit 95-A-215-S2

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 natural gas used to condition the desulfurizer beds shall not exceed 40 mmscf per 12 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.

- A. Record the amount of natural gas used to condition the desulfurizer beds, in scf. Calculate and record monthly and 12 month rolling totals.
- B. Calculate and record the total VOC emissions from this emission point, in tons per 12 month rolling period, based on natural gas usage and VOC content.

Authority for Requirement: DNR Construction Permit 95-A-215-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 75

Stack Opening, (inches, dia.): 12

Exhaust Flow Rate (scfm): 3800

Exhaust Temperature (°F): <500

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 95-A-215-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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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

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-06

Associated Equipment

Associated Emission Unit ID Numbers: See Table 3
 Emissions Control Equipment ID Number: See Table 3
 Emissions Control Equipment Description: See Table 3

Table 3:

EP	EU	Emission Unit Description	Raw Material	Rated Capacity (MMCF/hr)	Control Equipment	Construction Permit
EP-06	EU-08	High Temperature Shift (HTS)	Process Gas	2.52	CE-06 HTS Catalyst Bed	95-A-216-S3
	EU-09	Low Temperature Shift/Short Shift (LTS/SS)		2.52		

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: VOC

Emission Limit(s): 39.0 ton/yr

Authority for Requirement: DNR Construction Permit 95-A-216-S3

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 1550 lb/hr ⁽¹⁾; 255 lb/hr ⁽²⁾; 106.5 ton/yr

Authority for Requirement: DNR Construction Permit 95-A-216-S3

^{(1), (2)} Due to the safety issue with testing the stack for EP 6, Koch has requested separate emission limits for each vent which is ducted to EP 6. HTS vent is limited to 1550 lbs/hr and LTS/SS vent is limited to 255 lbs/hr.

Operational Limits & Requirements

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

Operating Limits

- A. The VOC PTE shall not exceed 39.0 tons per twelve-month rolling period (NOTE: VOC emissions are from venting natural gas).
- B. Operation of the HTS vent shall not exceed 132 hours per twelve-month rolling period. Venting of natural gas does not count towards the hourly limit. HTS venting may be routed through PIC 102 or PIC-5 but all venting that represents HTS operations shall be logged against the 132 hour limit.
- C. The sum of the operation of the LTS/SS vent (PIC-5) and the operation of the HTS vent shall not exceed 165 hours per twelve month rolling period. Venting of natural gas does not count towards the hourly limit.

- D. The catalyst used to control CO emissions shall be maintained and replaced per the manufacturer's instructions and specifications.

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. Maintain a record of the amount of natural gas emitted through EP 6 per twelve-month rolling period. Calculate and record the amount of VOCs emitted per twelve-month rolling period.
- B. Record the hours of operation for the High Temperature Shift vent per twelve-month rolling period.
- C. Record the hours of operation for the Low Temperature Shift/ Short Shift vent per twelve-month rolling period.
- D. Maintain a record of the CO sampling protocol, a copy of the Standard (ASTM D1946-90) and the sampling reports.
- E. Maintain a record of all maintenance and replacement of the catalyst used to control CO emissions.

Authority for Requirement: DNR Construction Permit 95-A-216-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 163

Stack Opening, (inches, dia.): 28

Exhaust Flow Rate (scfm): 42,000

Exhaust Temperature (°F): 550

Discharge Style: Vertical, without rain cap or obstruction

Authority for Requirement: DNR Construction Permit 95-A-216-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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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 –CO

Koch Fertilizer Ft. Dodge, LLC shall conduct stack testing for CO on EP-06. The most recent compliance test shall represent emissions from EP-06.

Test Method for Carbon Monoxide – See the table below

Pollutant	Test Run Time	Test Method	Frequency
CO	NA ⁽¹⁾	ASTM D1946-90 ⁽²⁾	Once every 24 months ^{(3) (4)}

⁽¹⁾This is met by collecting grab samples and calculating average concentrations, weighted according to flow rate and duration associated with each step of the startup process.

⁽²⁾Sampling shall be completed using ASTM D1946-90 or other DNR approved method. Each time sampling is required Koch Fertilizer Ft. Dodge, LLC shall submit the CO sampling protocol, a copy of the Standard (ASTM D1946-90) and follow-up report.

⁽³⁾Performance testing is required to be completed for the HTS Vent (EU-08). Eight grab samples shall be taken from the HTS vent over a minimum four-hour startup period in order to characterize a typical four-hour startup profile and calculate an hourly CO emission rate averaged over the entire startup period. The results shall be analyzed, averaged and weighted, as appropriate, according to flow rate and duration associated with each stage of the startup process to determine the 1-hour CO emission rate, in accordance with the CO sampling protocol required to be submitted and approved by DNR prior to conducting the test. The CO emissions shall not exceed 1550 lbs/hr.

⁽⁴⁾ Performance testing is required to be completed for the LTS/SS Vent (EU-09). Four grab samples shall be taken from the LTS/SS vent over a minimum two hour startup period in order to characterize a typical two hour startup profile and calculate an hourly CO emission rate averaged over the entire startup period. The results shall be analyzed, averaged and weighted, as appropriate, according to flow rate and duration associated with each stage of the startup process to determine the 1-hour CO emission rate, in accordance with the CO sampling protocol required to be submitted and approved by DNR prior to conducting the test. The CO emissions shall not exceed 255 lbs/hr.

⁽⁵⁾ Performance testing shall be completed at least once every 24 months. If EU-08 and EU-09 are not scheduled to operate (e.g. no scheduled startup) when the next performance test is due, the performance test will be conducted during the next scheduled startup following a planned outage.

Authority for Requirement: DNR Construction Permit 95-A-216-S3

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-07

Associated Equipment

Associated Emission Unit ID Numbers: EU-10
Emissions Control Equipment ID Number: CE-01
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-10
Emission Unit Description: Lime Silo
Raw Material/Fuel: Lime
Rated Capacity: 18.0 ton/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: 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"

Monitoring Requirements

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements. The data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-08

Associated Equipment

Associated Emission Unit ID Numbers: EU-11

Emission Unit vented through this Emission Point: EU-11

Emission Unit Description: Natural Gas Start-up Heater

Raw Material/Fuel: Natural Gas

Rated Capacity: 0.012 MMCF/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 11-A-463
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 (PM)

Emission Limit(s): 0.8 lb/MMBtu

Authority for Requirement: DNR Construction Permit 11-A-463
567 IAC 23.3(2) "b"(1)

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: DNR Construction Permit 11-A-463
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.

Operating Limits

A. This emission unit shall combust pipeline quality natural gas only.

Authority for Requirement: DNR Construction Permit 11-A-463

NESHAP

EU-11 (process heater) is subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63 Subpart DDDDD].

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): 74

Stack Opening, (inches, dia.): 33

Exhaust Flow Rate (scfm): 4493

Exhaust Temperature (°F): 1420

Discharge Style: Unobstructed, Vertical

Authority for Requirement: DNR Construction Permit 11-A-463

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-12

Associated Equipment

Associated Emission Unit ID Numbers: EU-14

Emission Unit vented through this Emission Point: EU-14

Emission Unit Description: North Murray Boiler

Raw Material/Fuel: Natural Gas

Rated Capacity: 0.035 MMCF/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: 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"

Operational Limits & Requirements

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

Operating Limits

A. This emission unit shall combust pipeline quality natural gas only.

Authority for Requirement: 567 IAC 22.108 (14)

NESHAP

EU-16 (boiler) is subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63 Subpart DDDDD].

Authority for Requirement: 40 CFR 63 Subpart DDDDD

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-13

Associated Equipment

Associated Emission Unit ID Numbers: EU-15

Emission Unit vented through this Emission Point: EU-15
Emission Unit Description: South Murray Boiler
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.035 MMCF/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: 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"

Operational Limits & Requirements

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

Operating Limits

A. This emission unit shall combust pipeline quality natural gas only.

Authority for Requirement: 567 IAC 22.108 (14)

NESHAP

EU-15 (boiler) is subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63 Subpart DDDDD].

Authority for Requirement: 40 CFR 63 Subpart DDDDD

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-14

Associated Equipment

Associated Emission Unit ID Numbers: EU-16

Emission Unit vented through this Emission Point: EU-16

Emission Unit Description: Diesel Generator

Raw Material/Fuel: Diesel Fuel

Rated Capacity: 760 Horsepower

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 98-A-746-S4
567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.84 lb/hr

Authority for Requirement: DNR Construction Permit 98-A-746-S4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.84 lb/hr

Authority for Requirement: DNR Construction Permit 98-A-746-S4

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 9.3 ton/yr ⁽¹⁾; 4.0 lb/MMBtu

Authority for Requirement: DNR Construction Permit 98-A-746-S4

⁽¹⁾Standard is a 12-month rolling total, based on operating limits.

Operational Limits & Requirements

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

Operating Limits

- A. This emissions unit is limited to burning a maximum of 33,214 gallons of fuel oil in any 12-month rolling period.
- B. This engine shall combust only #1 or #2 fuel oil. Prior to burning any other fuels, the permittee shall submit an application to the DNR - Air Quality Bureau to modify this permit.
- C. The sulfur content of the oil burned in this emissions unit shall not exceed 0.5 percent by weight. This limit applies at all times, including periods of startup, shutdown and malfunctions.

- D. The heat content of the oil burned in this emissions unit shall not exceed 140,000 BTU per gallon.

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 perform an analysis and shall maintain records on the sulfur content and the heat content of each shipment of oil received. Alternatively, the permittee shall have the oil supplier provide analyses on the sulfur content and the heat content of the oil received.
- B. The permittee shall keep the following monthly records:
 - i. The amount of fuel oil burned in the emissions unit (gallons); and
 - ii. The rolling, 12-month total of the amount of fuel oil burned in the emissions unit (gallons).

Authority for Requirement: DNR Construction Permit 98-A-746-S4

NESHAP:

The 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)(1)(i) this emergency engine, located at a major source, is an existing stationary RICE as it was constructed prior to December 19, 2002.

According to 63.6590(b)(3)(iii), an existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A, including initial notification requirements.

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

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 15.5

Stack Opening, (inches, dia.): 6

Exhaust Flow Rate (scfm): 1,450

Exhaust Temperature (°F): 855

Discharge Style: Vertical, Unobstructed

Authority for Requirement: DNR Construction Permit 98-A-746-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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-18

Associated Equipment

Associated Emission Unit ID Numbers: EU-20
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-20
Emission Unit Description: Ammonia Heater 2104-C
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.0101 MMCF/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: 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"

Operational Limits & Requirements

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

Operating Limits

A. This emission unit shall combust pipeline quality natural gas only.

Authority for Requirement: 567 IAC 22.108(14)

NESHAP

EU-20 (process heater) is subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63 Subpart DDDDD].

Authority for Requirement: 40 CFR 63 Subpart DDDDD

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-23

Emissions Control Equipment ID Number: CE-02

Emissions Control Equipment Description: Selective Catalytic Reduction

Continuous Emissions Monitors ID Numbers: ME01

Emission Unit vented through this Emission Point: EU-23

Emission Unit Description: Nitric Acid Plant Tail Gas

Raw Material/Fuel: Tail Gas

Rated Capacity: 2.88 MMCF/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): 10%

Authority for Requirement: DNR Construction Permit 96-A-580
40 CFR 60 Subpart G
567 IAC 23.1(2) "d"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 34.5 lb/hr; 151.2 ton/yr

Authority for Requirement: DNR Construction Permit 96-A-580

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 3.0 lb/ ton Nitric Acid (as 100%)

Authority for Requirement: DNR Construction Permit 96-A-580
40 CFR 60 Subpart G
567 IAC 23.1(2) "d"

Operational Limits & Requirements

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

Work practice standards

- A. The permittee shall install, calibrate, operate and maintain a continuous monitoring system for measuring nitrogen oxides (NO_x). A conversion factor shall be developed for converting monitoring data into units of the standard (lb/ton). Monitoring of the lb/hr emission limit shall be accomplished by multiplying the hourly averaged lb/ton by the tons/hour production (as 100 percent Nitric acid). All certifications, etc. shall be conducted per 40 CFR Part 60.73 and 40 CFR Part 60, Appendix B, Performance Specification 2.

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 the daily production rate and hours of operation.
- B. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as any 3-hour period during which the average nitrogen oxides emissions (arithmetic average of three contiguous 1-hour periods) as measured by a continuous monitoring system exceed 3.0 lb per ton of acid produced (as 100 percent Nitric Acid).
- C. For the purpose of excess emission reports required under 567 IAC Chapter 24, periods of excess emissions are defined as any 1-hour period in which NO_x emissions exceed 34.5 lb/hr.

Authority for Requirement: DNR Construction Permit 96-A-580
40 CFR 60 Subpart G
567 IAC 23.1(2) "d"

NSPS

This emission unit is subject to NSPS Subpart G – Standards of Performance for Nitric Acid Plants.

Authority for Requirement: DNR Construction Permit 96-A-580

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 125

Stack Opening, (inches, dia.): 42

Exhaust Flow Rate (acfm): 68,194

Exhaust Temperature (°F): 260

Discharge Style: NA

Authority for Requirement: DNR Construction Permit 96-A-580

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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:

Visible emissions shall be observed on a weekly basis to ensure that none occurs when the emission unit on this emission point is at or near full capacity. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a

Method 9 observation will be required. If an opacity equal to or greater than 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 observation and any action resulting from the observation for a minimum of five years.

Continuous Emissions Monitoring:

The permittee shall install, calibrate, operate and maintain a continuous monitoring system for measuring nitrogen oxides (NO_x). A conversion factor shall be developed for converting monitoring data into units of the standard (lb/ton). Monitoring of the lb/hr emission limit shall be accomplished by multiplying the hourly averaged lb/ton by the tons/hour production (as 100 percent Nitric acid). All certifications, etc. shall be conducted per 40 CFR Part §60.73 and 40 CFR Part 60, Appendix B, Performance Specification 2.

Pollutant – Nitrogen Oxides (NO_x)

Operational Specifications – 40 CFR Part 60 Subpart G

Date of Initial System Calibration and Quality Assurance – November 16, 2006

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60 Appendix B

Reporting & Record keeping – 40 CFR Part 60 Subpart G

Authority for Requirement: DNR Construction Permit 96-A-580
40 CFR 60 Subpart G
567 IAC 23.1(2) "d"

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

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements. The data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-22

Associated Equipment

Associated Emission Unit ID Numbers: EU-24

Emissions Control Equipment ID Number: CE-04

Emissions Control Equipment Description: Packed Bed Wet Scrubber

Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-24

Emission Unit Description: Ammonium Nitrate Neutralizer

Raw Material/Fuel: Ammonium Nitrate

Rated Capacity: 75.0 ton/hr, 32% UAN

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: Particulate Matter (PM₁₀)

Emission Limit(s): 4.8 lb/hr; 21.02 ton/yr

Authority for Requirement: DNR Construction Permit 96-A-581

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 80

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (acfm): 3,156

Exhaust Temperature (°F): 183

Discharge Style: NA

Authority for Requirement: DNR Construction Permit 96-A-581

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-25

Emission Unit vented through this Emission Point: EU-25

Emission Unit Description: Nitric Acid Working Loss

Raw Material/Fuel: Nitric Acid

Rated Capacity: 29.20 ton/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 96-A-582
567 IAC 23.3(2) "d"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.70 lb/hr; 3.07 ton/yr

Authority for Requirement: DNR Construction Permit 96-A-582

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 27

Stack Opening, (inches, dia.): 4

Exhaust Flow Rate (acfm): 18.9

Exhaust Temperature (°F): 120

Discharge Style: NA

Authority for Requirement: DNR Construction Permit 96-A-582

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-37

Associated Equipment

Associated Emission Unit ID Numbers: EU-37

Emission Unit vented through this Emission Point: EU-37

Emission Unit Description: Administration Building Emergency Generator

Raw Material/Fuel: Natural Gas

Rated Capacity: 224 bhp

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

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

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

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

Pollutant: Nitrogen Oxide (NO_x)

Emission Limit(s): 2.0 g/HP-hr

Authority for Requirement: 40 CFR 60.4233(e)
567 IAC 23.1(2) "zzz"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 1.0 g/HP-hr

Authority for Requirement: 40 CFR 60.4233(e)
567 IAC 23.1(2) "zzz"

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 4.0 g/HP-hr

Authority for Requirement: 40 CFR 60.4233(e)
567 IAC 23.1(2) "zzz"

Operational Limits & Requirements

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

NSPS

This emission unit is subject to NSPS Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

Authority for Requirement: 40 CFR Part 60 Subpart JJJJ
567 IAC 23.1(2) “zzz”

NESHAP:

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 Standards:

(40 CFR 60.4233(e) 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 ⁽²⁾	VOC ⁽³⁾	NO _x	CO	VOC
25 < HP < 130	1/1/2009+	N/A	10	387	N/A	N/A	N/A	N/A
HP ≥ 130	1/1/2009+	2.0	N/A	4.0	1.0	160	540	86

⁽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⁾ See rule for alternative CO certification standards for engines ≥ 100 hp and manufactured prior to 1/1/2011.

⁽³⁾ Formaldehyde emissions are not included.

Compliance Demonstrations:

1. You must demonstrate compliance with the emission standards according to one of following methods (40 CFR 60.4243(b)):

- a) Purchasing a certified engine that complies with the emission standards, or
- b) Purchasing a non-certified engine and demonstrating compliance with the emission standards. You must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct performance tests to demonstrate compliance in accordance

with 40 CFR 60.4244. Owners and operators are required to notify the DNR 30 days prior to the test date and are required to submit a stack test report to the DNR within 60 days after the completion of the testing. See 40 CFR 60.4243(b) for additional information.

Maximum Engine Power	Initial Test	Subsequent Test
25 < HP ≤ 500	Required	Not required
500 < HP	Required	Every 8,760 hours or 3 years, whichever comes first

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), 60.4243(a) and 60.4245(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 ≤ 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).
6. Owners and operators of non-certified engines or certified engines operating in a non-certified manner must keep documentation that these engines meet the applicable emission standards. 40 CFR 60.4245(a)(4).

Operating and Recordkeeping Requirements (40 CFR 60.4243(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
130 ≤ HP < 500	1/1/2011
500 ≤ HP	7/1/2010

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.
130 ≤ HP < 500	7/1/2011	
500 ≤ HP	7/1/2010	

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-38

Associated Equipment

Associated Emission Unit ID Numbers: EU-38
Emissions Control Equipment ID Number: CE-10
Emissions Control Equipment Description: Mist Eliminator
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-38
Emission Unit Description: Ammonia 4th Cell Cooling Tower
Raw Material/Fuel: Cooling water
Rated Capacity: 330,000 gallons/hr

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40% ⁽¹⁾
Authority for Requirement: DNR Construction Permit 14-A-263
567 IAC 23.3(2) "d"

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions 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): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 14-A-263
567 IAC 23.3(2) "a"(1)

Operational Limits & Requirements

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

- A. This unit shall not use chromium based water treatment chemicals.
- B. The total dissolved solids (TDS) content of the water in this cooling tower shall not exceed 6000 ppm.

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. Maintain a record of any water treatment chemicals used in this unit.
- B. Monitor the TDS content by sampling or testing at least once per calendar quarter.

Authority for Requirement: DNR Construction Permit 14-A-263

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 31.75

Stack Opening, (inches, dia.): 240

Exhaust Flow Rate (scfm): 495,000

Exhaust Temperature (°F): 110

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 14-A-263

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-39

Associated Equipment

Associated Emission Unit ID Numbers: EU-39
Emissions Control Equipment ID Number: CE-07
Emissions Control Equipment Description: Mist Eliminator
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-39
Emission Unit Description: Ammonia 3-Cell Cooling Tower
Raw Material/Fuel: Cooling water
Rated Capacity: 1,320,000 gallons/hr (total for 3 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): 40% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 14-A-575
567 IAC 23.3(2) "d"

⁽¹⁾ An exceedance of the indicator opacity "No Visible Emissions" 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): 0.66 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 14-A-575
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.

- A. This cooling tower shall not use chromium based water treatment chemicals.
- B. The circulating water in the cooling tower shall not exceed 6,000 parts per million (ppm) total dissolved solids (TDS).
- C. The Mist Eliminator (CE 07) shall be designed to meet a control efficiency of 0.001% (gallons of drift per gallon of cooling water flow) or better.
- D. The owner or operator shall inspect the cooling tower at least once per calendar year.
- E. The owner or operator shall develop a written protocol of the cooling tower inspection and maintenance.

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 records on-site of the TDS concentration in the cooling tower circulating water. Records shall also be kept of the dates of measurement and the methods used to determine the concentration of the TDS in the cooling water.
- B. The owner or operator shall maintain records of all maintenance and repair to the cooling tower.
- C. The owner or operator shall maintain MSDS for all water treatment chemicals used at this cooling tower.

Authority for Requirement: DNR Construction Permit 14-A-575

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 65.83
 Stack Opening, (ft, dia.): 30 for each cell
 Exhaust Flow Rate (scfm): 768,800 for each cell
 Exhaust Temperature (°F): 105
 Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 14-A-575

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-40

Associated Equipment

Associated Emission Unit ID Numbers: EU-40
Emissions Control Equipment ID Number: CE-08
Emissions Control Equipment Description: Mist Eliminator
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-40
Emission Unit Description: Ammonia 5th Cell Cooling Tower
Raw Material/Fuel: Cooling water
Rated Capacity: 600,000 gallons/hr

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 14-A-576
567 IAC 23.3(2) "d"

⁽¹⁾ An exceedance of the indicator opacity "No Visible Emissions" 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): 0.60 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 14-A-576
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.

- A. This cooling tower shall not use chromium based water treatment chemicals.
- B. The circulating water in the cooling tower shall not exceed 6,000 parts per million (ppm) total dissolved solids (TDS).
- C. The Mist Eliminator (CE 08) shall be designed to meet a control efficiency of 0.002% (gallons of drift per gallon of cooling water flow) or better.
- D. The owner or operator shall inspect the cooling tower at least once per calendar year.
- E. The owner or operator shall develop a written protocol of the cooling tower inspection and maintenance.

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 records on-site of the TDS concentration in the cooling tower circulating water. Records shall also be kept of the dates of measurement and the methods used to determine the concentration of the TDS in the cooling water.
- B. The owner or operator shall maintain records of all maintenance and repair to the cooling tower.
- C. The owner or operator shall maintain MSDS for all water treatment chemicals used at this cooling tower.

Authority for Requirement: DNR Construction Permit 14-A-576

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 45.5

Stack Opening, (ft, dia.): 26

Exhaust Flow Rate (scfm): 887,000

Exhaust Temperature (°F): 103

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 14-A-576

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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-41

Associated Equipment

Associated Emission Unit ID Numbers: EU-41
Emissions Control Equipment ID Number: CE-09
Emissions Control Equipment Description: Mist Eliminator
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-41
Emission Unit Description: UAN 2-Cell Cooling Tower
Raw Material/Fuel: Cooling water
Rated Capacity: 1,260,000 gallons/hr total for 2 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): 40% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 14-A-577
567 IAC 23.3(2) "d"

⁽¹⁾ An exceedance of the indicator opacity "No Visible Emissions" 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): 1.26 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 14-A-577
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.

- A. This cooling tower shall not use chromium based water treatment chemicals.
- B. The circulating water in the cooling tower shall not exceed 6,000 parts per million (ppm) total dissolved solids (TDS).
- C. The Mist Eliminator (CE 09) shall be designed to meet a control efficiency of 0.002% (gallons of drift per gallon of cooling water flow) or better.
- D. The owner or operator shall inspect the cooling tower at least per calendar year.
- E. The owner or operator shall develop a written protocol of the cooling tower inspection and maintenance.

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 records on-site of the TDS concentration in the cooling tower circulating water. Records shall also be kept of the dates of measurement and the methods used to determine the concentration of the TDS in the cooling water.
- B. The owner or operator shall maintain records of all maintenance and repair to the cooling tower.
- C. The owner or operator shall maintain MSDS for all water treatment chemicals used at this cooling tower.

Authority for Requirement: DNR Construction Permit 14-A-577

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 33
- Stack Opening, (ft, dia.): 26 diameter for each cell
- Exhaust Flow Rate (scfm): 871,200 for each cell
- Exhaust Temperature (°F): 98
- Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 14-A-577

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 any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence 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)

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, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air Permits, 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 following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
 - a. Form 1.0 "Facility Identification";
 - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
 - c. Form 5.0 "Title V annual emissions summary/fee"; and
 - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
 - a. Form 1.0 "Facility Identification";
 - b. Form 5.0 "Title V annual emissions summary/fee";
 - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.

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

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

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

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

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

G8. Duty to Provide Information

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

G9. General Maintenance and Repair Duties

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

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

G10. Recordkeeping Requirements for Compliance Monitoring

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

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

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

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

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

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

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

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

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

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

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

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

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

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

G13. Hazardous Release

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

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess

emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. 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.

567 IAC 22.110(1)

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. Exceedances of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators.

The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

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

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

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
 - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.
 - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a"*, *567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
 - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
 - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
 - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
 - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
 - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*
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
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(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:

Chief of Air Permits
U.S. EPA Region 7
Air Permits and Compliance Branch
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
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 725-9500

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

Field Office 2

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

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

Field Office 5
7900 Hickman Road, Suite #200
Windsor Heights, IA 50324
(515) 725-0268

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

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

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

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

Linn County Public Health
Air Quality Branch
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

V. Appendix

- A. 40 CFR 60 Subpart G – Standards of Performance for Nitric Acid Plants
<http://www.ecfr.gov/cgi-bin/text-idx?SID=c4ecfe64c2c307ef6e086dd091eda2b1&mc=true&node=sp40.7.60.g&rgn=div6>
- B. 40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
<http://www.ecfr.gov/cgi-bin/text-idx?SID=c4ecfe64c2c307ef6e086dd091eda2b1&mc=true&node=sp40.7.60.jjjj&rgn=div6>
- C. 40 CFR 61 Subpart FF – National Emission Standard for Benzene Waste Operations
<http://www.ecfr.gov/cgi-bin/text-idx?SID=f4d5c220574b857e40c2c8ba88805b3a&mc=true&node=sp40.9.61.ff&rgn=div6>
- D. 40 CFR 63 Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
<http://www.ecfr.gov/cgi-bin/text-idx?SID=c4ecfe64c2c307ef6e086dd091eda2b1&mc=true&node=sp40.14.63.zzzz&rgn=div6>
- E. 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters
<http://www.ecfr.gov/cgi-bin/text-idx?SID=c4ecfe64c2c307ef6e086dd091eda2b1&mc=true&node=sp40.14.63.ddddd&rgn=div6>