Iowa Department of Natural Resources
Title V Operating Permit

Name of Permitted Facility: University of Northern Iowa
Power Plant
Facility Location: 1901 West 30th Street, Cedar Falls, IA 50614

Air Quality Operating Permit Number: 04-TV-022R2
Expiration Date: June 19, 2023
Permit Renewal Application Deadline: December 19, 2022

EIQ Number: 92-5192
Facility File Number: 07-02-006

Responsible Official
Name: Brent Maitland
Title: Power Plant Manager
Mailing Address: University of Northern Iowa
1901 West 30th Street, Cedar Falls, IA 50614
Phone #: (319) 273-6393

Permit Contact Person for the Facility
Name: Brent Maitland
Title: Power Plant Manager
Mailing Address: University of Northern Iowa Power Plant
1901 West 30th Street, Cedar Falls, IA, 50614
Phone #: (319) 273-6393

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit. Two separate Title V permits are issued for the University of Northern Iowa (one stationary source). This Title V permit is for the Power Plant portion of the University and the Title V permit 02-TV-016R2 (EIQ # 92-5628) has been issued for the Main Campus.

For the Director of the Department of Natural Resources

Lori Hanson, Supervisor of Air Operating Permits Section    Date
Table of Contents

I. Facility Description and Equipment List ................................................................. 4

II. Plant - Wide Conditions ....................................................................................... 5

III. Emission Point Specific Conditions ................................................................... 8

IV. General Conditions ............................................................................................. 49
   G1. Duty to Comply
   G2. Permit Expiration
   G3. Certification Requirement for Title V Related Documents
   G4. Annual Compliance Certification
   G5. Semi-Annual Monitoring Report
   G6. Annual Fee
   G7. Inspection of Premises, Records, Equipment, Methods and Discharges
   G8. Duty to Provide Information
   G9. General Maintenance and Repair Duties
   G10. Recordkeeping Requirements for Compliance Monitoring
   G11. Evidence used in establishing that a violation has or is occurring.
        Compliance Certification
   G13. Hazardous Release
   G14. Excess Emissions and Excess Emissions Reporting Requirements
   G15. Permit Deviation Reporting Requirements
   G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP
        Regulations
   G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V
        Permit Modification
   G18. Duty to Modify a Title V Permit
   G19. Duty to Obtain Construction Permits
   G20. Asbestos
   G21. Open Burning
   G22. Acid Rain (Title IV) Emissions Allowances
   G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements
   G24. Permit Reopenings
   G25. Permit Shield
   G26. Severability
   G27. Property Rights
   G28. Transferability
   G29. Disclaimer
   G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification
   G31. Prevention of Air Pollution Emergency Episodes
   G32. Contacts List

V. Appendix A: Compliance Assurance Monitoring (CAM) Plans .............................. 62
   Appendix B: Weblinks to Standards ....................................................................... 68
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
IDNR ..........................Iowa Department of Natural Resources
MVAC ..........................motor vehicle air conditioner
NAICS ..........................North American Industry Classification System
Ng/J .............................Nanograms per joule
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
VMT/hr ..........................Vehicle Miles Traveled per hour

Pollutants
PM ..............................particulate matter
PM_{10} ........................particulate matter ten microns or less in diameter
SO_{2} ..........................sulfur dioxide
NO_{x} ..........................nitrogen oxides
VOC ...........................volatile organic compound
CO ..............................carbon monoxide
HAP .............................hazardous air pollutant
I. Facility Description and Equipment List

Facility Name: University of Northern Iowa – Power Plant
Permit Number: 04-TV-022R2

Facility Description: College/University (SIC 8221)

<table>
<thead>
<tr>
<th>Emission Point Number</th>
<th>Emission Unit Number</th>
<th>Emission Unit Description</th>
<th>IDNR Construction Permit Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-1</td>
<td>EU-199-BLR-1</td>
<td>Boiler #1</td>
<td>None</td>
</tr>
<tr>
<td>EP-199-2</td>
<td>EU-199-BLR-2</td>
<td>Boiler #2</td>
<td>None</td>
</tr>
<tr>
<td>EP-199-3</td>
<td>EU-199-BLR-3</td>
<td>Boiler #3</td>
<td>07-A-301-P2</td>
</tr>
<tr>
<td></td>
<td>EU-199-BLR-4</td>
<td>Boiler #4</td>
<td></td>
</tr>
<tr>
<td>EP-199-5B</td>
<td>EUF-199-ASH-5B</td>
<td>#3 Ash System-Silo</td>
<td>07-A-302</td>
</tr>
<tr>
<td>EP-199-6A</td>
<td>EU-199-ASH-6A</td>
<td>#4 Ash System-Conveying</td>
<td>07-A-304-P1</td>
</tr>
<tr>
<td>EP-199-8B</td>
<td>EU-199-CHS-8B</td>
<td>Coal System-Bunker #3 Silo</td>
<td>07-A-308-P1</td>
</tr>
<tr>
<td>EPF-199-9B</td>
<td>EUF-199-COAL-9B</td>
<td>Coal Pile Truck Traffic</td>
<td>07-A-310-P</td>
</tr>
<tr>
<td>EPF-199-9D</td>
<td>EUF-199-COAL-9D</td>
<td>Coal Pile Reclaim Hopper</td>
<td>07-A-312-P2</td>
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<tr>
<td>EPF-199-10A</td>
<td>EUF-199-COKE-10A</td>
<td>Petroleum Coke Receiving</td>
<td>None</td>
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<tr>
<td>EPF-199-10B</td>
<td>EUF-199-COKE-10B</td>
<td>Petroleum Coke Pile</td>
<td>None</td>
</tr>
<tr>
<td>EPF-199-10C</td>
<td>EUF-199-COKE-10C</td>
<td>Petroleum Coke Reclaim</td>
<td>None</td>
</tr>
<tr>
<td>EP-199-11</td>
<td>EU-199-AST-11</td>
<td>Fuel Oil Storage Tank</td>
<td>None</td>
</tr>
<tr>
<td>EP-199-12</td>
<td>EU-199-DSI-12</td>
<td>DSI Silo #1</td>
<td>15-A-300</td>
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</table>

Insignificant Activities Equipment List

<table>
<thead>
<tr>
<th>Insignificant Emission Unit Number</th>
<th>Insignificant Emission Unit Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUF-199-WELD-14</td>
<td>Maintenance Welding</td>
</tr>
<tr>
<td>EUF-199-PARTS-15</td>
<td>Parts Washer</td>
</tr>
<tr>
<td>EU-199-LUBE-13</td>
<td>Lube Oil Vapor Extractor</td>
</tr>
</tbody>
</table>
II. Plant-Wide Conditions

Facility Name: University of Northern Iowa – Power Plant
Permit Number: 04-TV-022R2

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

Permit Duration

The term of this permit is: Five years from permit issuance.
Commencing on: June 20, 2018
Ending on: June 19, 2023

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

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

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

Sulfur Dioxide (SO2): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:
No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed on or after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.
For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported or stored or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. (the preceding sentence is
State Only) All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The public highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not be limited to, the following procedures.

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

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

40 CFR 60 Subpart A Requirements
This facility is an affected source and these General Provisions apply to the facility. The affected units are Boiler #4 (EU-199-BLR-4), Coal System-Plant Coal Handling (EU 199-CHS-8A), and Coal System-Bunker #3 Silo (EU-199-CHS-8B).
See Appendix B for the link of the Standard.
Authority for Requirement: 40 CFR 60 Subpart A
567 IAC 23.1(2)

40 CFR 60 Subpart Db Requirements
This facility is subject to Standards of Performance for Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The affected unit is Boiler #4 (EU-199-BLR-4).
See Appendix B for the link of the Standard.
Authority for Requirement: 40 CFR 60 Subpart Db
567 IAC 23.1(2)"ccc"

40 CFR 60 Subpart Y Requirements
This facility is subject to Standards of Performance for Coal Preparation Plants and Processing Plants. The affected units are Coal System-Plant Coal Handling (EU 199-CHS-8A) and Coal System-Bunker #3 Silo (EU-199-CHS-8B).
See Appendix B for the link of the Standard.
Authority for Requirement: 40 CFR 60 Subpart Y
567 IAC 23.1(2)"v"
**40 CFR 63 Subpart A Requirements**

This facility is an affected source and these General Provisions apply to the facility. The affected units are Boiler #1 (EU-199-BLR-1), Boiler #2 (EU-199-BLR-2), Boiler #3 (EU-199-BLR-3) and Boiler #4 (EU-199-BLR-4).

See Appendix B for the link of the Standard.

Authority for Requirement: 40 CFR 63 Subpart A

567 IAC 23.1(4)"a"

**40 CFR 63 Subpart DDDDD Requirements**

This facility is subject to National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The affected units are Boiler #1 (EU-199-BLR-1), Boiler #2 (EU-199-BLR-2), Boiler #3 (EU-199-BLR-3) and Boiler #4 (EU-199-BLR-4).

See Appendix B for the link of the Standard.

Authority for Requirement: 40 CFR 63 Subpart DDDDD
III. Emission Point-Specific Conditions

Facility Name: University of Northern Iowa – Power Plant
Permit Number: 04-TV-022R2


Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point Number</th>
<th>Emission Unit Number</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-1</td>
<td>EU-199-BLR-1</td>
<td>Boiler #1</td>
<td>Natural Gas/#2 Fuel Oil</td>
<td>83.8</td>
</tr>
<tr>
<td>EP-199-2</td>
<td>EU-199-BLR-2</td>
<td>Boiler #2</td>
<td>Natural Gas/#2 Fuel Oil</td>
<td>83.8</td>
</tr>
</tbody>
</table>

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each of these emission points shall not exceed the levels specified below.


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

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

Pollutant: Sulfur Dioxide (SO₂) (when burning #2 fuel oil)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3)"b"(2)

Pollutant: Sulfur Dioxide (SO₂) (when burning natural gas)
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.

Emission Units EU-199-BLR-1 and EU-199-BLR-2

Process throughput:

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

NESHAP Applicability
Boiler #1 (EU-199-BLR-1) and Boiler #2 (EU-199-BLR-2) are subject to the following federal regulation: 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 Part 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 Numbers: EP-199-3

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point Number</th>
<th>Emission Unit Number</th>
<th>Control Equipment ID Number</th>
<th>Control Equipment Description</th>
<th>Emissions Monitors ID Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EU-199-BLR-4</td>
<td>CE 199-4B CE 199-4 CE 199-4C CE DSI-4</td>
<td>Low NOx Burners (LNB)/ Secondary Air Baghouse Limestone Injection Sorbent Injection System</td>
<td>ME-199-4: SO2, NOx, Diluent CO2, Opacity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Point Number</th>
<th>Emission Unit Number</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-3</td>
<td>EU-199-BLR-3</td>
<td>Boiler #3</td>
<td>Coal/#2 Fuel Oil</td>
<td>163.6</td>
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<td>EU-199-BLR-4</td>
<td>Boiler #4</td>
<td>Coal/Petroleum Coke</td>
<td>143.1</td>
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</table>

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.

EP-199-3; EU-199-BLR-3, Boiler #3

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

Pollutant: Particulate Matter (PM) - Federal
Emission Limits: 58.3 lbs/hr
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 0.2 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(2)"b"
DNR Construction Permit 07-A-301-P2
Pollutant: Sulfur Dioxide (SO₂)
Emission Limits: 2,222.6 tons/yr (1), 6 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3)"a"
DNR Construction Permit 07-A-301-P2

Pollutant: Nitrogen Oxide (NO₃)
Emission Limits: 295.99 tons/yr (1)
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Carbon Monoxide (CO)
Emission Limits: 185.6 tons/yr (1)
Authority for Requirement: DNR Construction Permit 07-A-301-P2

(1) Standard is a twelve month rolling total.

EP-199-3; EU-199-BLR-4, Boiler #4, BACT Emission Limits

Pollutant: Opacity
Emission Limits: 5 % (1-hour average)
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM₁₀)
Emission Limits: 0.033 lb/MMBtu
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Particulate Matter (PM)
Emission Limits: 0.035 lb/MMBtu
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Sulfur Dioxide (SO₂)
Emission Limits: 187.7 tons/yr (1), 95% reduction (2)
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Nitrogen Oxide (NO₃)
Emission Limits: 69.0 tons/yr (1), 0.11 lb/MMBtu (3)
Authority for Requirement: DNR Construction Permit 07-A-301-P2

(1) Standard is a twelve month rolling total.
(2) The reduction is based on 95% removal of sulfur from all fuels combusted. This standard is a 30-day rolling average not including periods of startup, shutdown, and malfunction.
(3) This standard is a 30-day rolling average not including periods of startup, shutdown, and malfunction.
EP-199-3; EU-199-BLR-4, Boiler #4, Other Emission Limits

Pollutant: Opacity
Emission Limits: 20 % (1)
(1) Opacity shall not exceed 20% (6-minute average), except for one (1) 6-minute period per hour of not more than 27% opacity.
Authority for Requirement: 567 IAC 23.1(2)"ccc"
DNR Construction Permit 07-A-301-P2

Pollutant: Particulate Matter (PM) - Federal
Emission Limits: 22 ng/J (0.051 lb/MMBtu)
Authority for Requirement: 567 IAC 23.1(2)"ccc"
DNR Construction Permit 07-A-301-P2

Pollutant: Sulfur Dioxides (SO₂)
Emission Limits: See Footnote (2)
Authority for Requirement: 567 IAC 23.1(2)"ccc"
DNR Construction Permit 07-A-301-P2

Pollutant: Nitrogen Oxides (NOₓ)
Emission Limits: 260 ng/J (0.60 lb/MMBtu) (3)
Authority for Requirement: 567 IAC 23.1(2)"ccc"
DNR Construction Permit 07-A-301-P2

Pollutant: Carbon Monoxide (CO)
Emission Limits: 22.6 lbs/hr
Authority for Requirement: DNR Construction Permit 07-A-301-P2

(2) SO₂ emission limit is determined by the following formula:

\[ E_s = \frac{(K_a H_a + K_b H_b)}{(H_a + H_b)} \]

where:  \( E_s \) is the SO₂ emission limit (in either ng/J or lb/MMBTU heat input)
\( K_a \) is 520 ng/J or 1.2 lb/MMTU
\( K_b \) is 340 ng/J or 0.8 lb/MMTU
\( H_a \) is the heat input from the combustion of coal (in either J or MMBTU)
\( H_b \) is the heat input from the combustion of oil (in either J or MMBTU)

Only the heat input supplied from the combustion of coal and oil is counted. No credit is provided for the heat input from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat input from other sources such as gas turbines, internal combustion engines, kilns, etc. This limit is a 30-day rolling average and applies at all times including periods of startup, shutdown, and malfunction.

(3) The limit is a 30-day rolling average that includes periods of startup, shutdown, and malfunction.
EP-199-3 Stack Emission Limits

Pollutant: Particulate Matter (PM$_{10}$)  
Emission Limits: 64.73 lbs/hr  
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Sulfur Dioxides (SO$_2$)  
Emission Limits: 1067.67 lbs/hr  
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Nitrogen Oxide (NO$_x$)  
Emission Limits: 113.53 lbs/hr  
Authority for Requirement: DNR Construction Permit 07-A-301-P2

Pollutant: Carbon Monoxide (CO)  
Emission Limits: 65.09 lbs/hr  
Authority for Requirement: DNR Construction Permit 07-A-301-P2

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

NSPS and NESHAP Applicability

Boiler 4 is subject to Subparts A (General Provisions; 40 CFR §60.1 – 40 CFR §60.19) and Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units; 40 CFR §60.40b – 40 CFR §60.49b) of the NSPS.

Authority for Requirement: DNR Construction Permit 07-A-301-P2
40 CFR 60 Subpart Db  
567 IAC 23.1(2)"ccc"
40 CFR 60 Subpart A  
567 IAC 23.1(2)

Boiler 3 and Boiler 4 are subject to the 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 Part 63 Subpart DDDDD

Operating Limits:

Operating limits for this emission unit shall be:

A. Boiler 3 is limited to firing on coal and/or oil.
B. Boiler 4 is limited to firing on coal and/or petroleum coke.
C. The sulfur content of the fuel used shall not exceed 6.0% (by weight).
D. The combined steam production from Boilers 3 & 4 shall not exceed 211,500 lb/hr.
E. Boiler 4 is subject to all applicable operating limits set forth in NSPS Subparts A (40 CFR
F. The owner or operator shall conduct an inspection of the emission units (EU 199-BLR-3 and EU 199-BLR-4) and the associated control equipment (CE 199-3, CE 199-4, CE DSI-3 and CE DSI-4) at a minimum of once per year and correct/repair any issues discovered during the inspection.

Authority for Requirement: DNR Construction Permit 07-A-301-P2

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. These records shall show the following:

A. For each boiler and for each day of operation:
   (1) The date,
   (2) The fuel(s) combusted that day,
   (3) The total amount of each fuel combusted, and
   (4) An analysis showing the sulfur content representative of the fuel combusted for that day.
B. The 30-day rolling average for SO2 reduction for Boiler 4.
C. The hourly steam production for each boiler along with the combined total steam production.
D. All applicable recordkeeping set forth in NSPS Subparts A (40 CFR §60.1 – 40 CFR §60.19) and Db (40 CFR §60.40b – 40 CFR §60.49b).
E. The owner or operator shall maintain a log of all inspections and maintenance activities performed on the emission units (EU 199-BLR-3 and EU 199-BLR-4) and the associated control equipment (CE 199-3, CE 199-4, CE DSI-3 and CE DSI-4). This log shall include but not limited to the date the inspection or maintenance activity occurred and any issues identified or addressed.

Authority for Requirement: DNR Construction Permit 07-A-301-P2

Emission Point Characteristics
This emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 198
Stack Opening, (inches, dia.): 54
Exhaust Flow Rate (scfm): 75,300
Exhaust Temperature (°F): 345
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 07-A-301-P2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.
Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing:

Boiler 3:

Pollutant – Particulate Matter (PM) – State
1st Stack Test to be Completed by June 19, 2020
Test Method – 40 CFR 60, Appendix A, Method 5
  40 CFR 51, Appendix M, Method 202
Authority for Requirement – 567 IAC 22.108(3)

Pollutant – Particulate Matter (PM10)
1st Stack Test to be Completed by June 19, 2020
Test Method – 40 CFR 51, Appendix M, 201A with 202
Authority for Requirement – 567 IAC 22.108(3)

Boiler 4:

Pollutant – Particulate Matter (PM) – State
1st Stack Test to be Completed by June 19, 2020
Test Method – 40 CFR 60, Appendix A, Method 5
  40 CFR 51, Appendix M, Method 202
Authority for Requirement – 567 IAC 22.108(3)

Pollutant – Particulate Matter (PM10)
1st Stack Test to be Completed by June 19, 2020
Test Method – 40 CFR 51, Appendix M, 201A with 202
Authority for Requirement – 567 IAC 22.108(3)

Continuous Emission Monitoring:

Pollutant – Opacity (ME-199-3 and ME-199-4)
Operational Specifications - 40 CFR Part 60 Subpart Db
Date of Initial System Calibration and Quality Assurance - February 1, 1991(ME-199-4);
  May 13, 2016 (ME-199-3)
Ongoing System Calibration/Quality Assurance –As found in 40 CFR Part 60 Subpart Db
Reporting & Record keeping – As found in 40 CFR Part 60 Subpart Db. Submit all reports and
petitions required by 40 CFR 60 to the Iowa DNR in order to demonstrate compliance with
continuous emission monitoring and the 20% opacity (visible emissions) limit.
Authority for Requirement: 40 CFR 60 Subpart Db
  567 IAC 23.1(2)"ccc"
  DNR Construction Permit 07-A-301-P2
Pollutant – SO₂ (ME-199-4)
Operational Specifications - 40 CFR Part 60 Subpart Db
Date of Initial System Calibration and Quality Assurance – February 1, 1991
Ongoing System Calibration/Quality Assurance – As found in 40 CFR Part 60 Subpart Db
Reporting & Record keeping – As found in 40 CFR Part 60 Subpart Db. Submit all reports and petitions required by 40 CFR 60 to the Iowa DNR in order to demonstrate compliance with the SO₂ emission limit for boiler 4.
Authority for Requirement: 40 CFR 60 Subpart Db
567 IAC 23.1(2)“ccc"
DNR Construction Permit 07-A-301-P2

Pollutant - NOₓ (ME-199-4)
Operational Specifications - 40 CFR Part 60 Subpart Db
Date of Initial System Calibration and Quality Assurance - February 1, 199164.
Ongoing System Calibration/Quality Assurance – As found in 40 CFR Part 60 Subpart Db
Reporting & Record keeping – As found in 40 CFR Part 60 Subpart Db. Submit all reports and petitions required by 40 CFR 60 to the Iowa DNR in order to demonstrate compliance with the NOₓ emission limit for boiler 4.
Authority for Requirement: 40 CFR 60 Subpart Db
567 IAC 23.1(2)“ccc"
DNR Construction Permit 07-A-301-P2

Other Parameters:
Pollutant – Diluent Carbon Dioxide (CO₂) (ME-199-4)
Operational Specifications - 40 CFR Part 60 Subpart Db
Ongoing System Calibration/Quality Assurance - 40 CFR Part 60 Subpart Db
Reporting & Record keeping - 40 CFR Part 60 Submit all reports and petitions required by 40 CFR 60 Subpart Db to the Iowa DNR in order to demonstrate compliance with continuous emission monitoring.
Authority for Requirement: 40 CFR 60 Subpart Db
567 IAC 23.1(2)“ccc"
DNR Construction Permit 07-A-301-P2

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

Authority for Requirement – 567 IAC 22.108(3)

A. The following monitoring systems are required:

I. Boiler 4 requirements:

In accordance with 40 CFR §60.48b(a), the owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system (CEMS) on Boiler 4, and record the output of the system, for measuring the opacity of emissions discharged to the
atmosphere. If opacity interference due to water droplets exists in the stack (for example, from the use of an FGD system), the opacity is monitored upstream of the interference (at the inlet to the FGD system). If opacity interference is experienced at all locations (both at the inlet and outlet of the sulfur dioxide control system), alternate parameters indicative of the particulate matter control system's performance are monitored (subject to the approval of the Administrator). The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 1 (PS1).

In accordance with 40 CFR §60.47b(a), the owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) on Boiler 4 for measuring sulfur dioxide (SO$_2$) and either oxygen (O$_2$) or carbon dioxide (CO$_2$) and shall record the output of the systems. The SO$_x$ and either O$_2$ or CO$_2$ concentrations shall be monitored at both the inlet and outlet of the SO$_2$ control device. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit. The owner or operator shall meet the requirements of 40 CFR §60.47b for monitoring of SO$_2$ emissions.

In accordance with 40 CFR §60.47b(b), the owner or operator shall install, calibrate, maintain, and operate a CEMS on Boiler 4, and record the output of the system, for measuring nitrogen oxides (NO$_x$) emissions discharged to the atmosphere. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit. The owner or operator shall meet the requirements of 40 CFR §60.48b for monitoring of NO$_x$ emissions.

II. Emission Point Requirements:

- For SO$_2$, the owner or operator shall either:

  (1) Install, calibrate, maintain, and operate a CEMS on either Boiler 3 or the stack for the combined exhaust of Boilers 3 & 4 (EP 199-3), and record the output of the system, for measuring SO$_2$ emissions discharged to the atmosphere. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.

  (2) Assume all the sulfur in the fuel combusted is converted to SO$_2$. The sulfur content used in the calculation shall be based on the monitoring required in Reporting and Recordkeeping condition A, above.
• For NO\textsubscript{x}, the owner or operator shall either:

(1) Install, calibrate, maintain, and operate a CEMS on either Boiler 3 or the stack for the combined exhaust of Boilers 3 & 4 (EP 199-3), and record the output of the system, for measuring NO\textsubscript{x} emissions discharged to the atmosphere. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.

(2) Conduct a stack test (40 CFR 60, Appendix A, Method 7E) each quarter that Boiler 3 operates more than thirty (30) days in that quarter. Consecutive stack tests shall be a minimum of thirty (30) days apart. The tests shall be conducted under the same operating and combustion conditions as the CO stack tests required in this section of the permit.

• For CO, the owner or operator shall either:

(1) Install, calibrate, maintain, and operate a CEMS on either Boiler 3 or the stack for the combined exhaust of Boilers 3 & 4 (EP 199-3), and record the output of the system, for measuring carbon monoxide (CO) emissions discharged to the atmosphere. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 4A (PS4A) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.

(2) Conduct a stack test (40 CFR 60, Appendix A, Method 10) each quarter that Boiler 3 operates more than thirty (30) days in that quarter. Consecutive stack tests shall be a minimum of thirty (30) days apart. The tests shall be conducted under the same operating and combustion conditions as the NO\textsubscript{x} stack tests required in this section of the permit.

B. Compliance with the non-NSPS Boiler 4 opacity, SO\textsubscript{2}, and NO\textsubscript{x} emission standards of this permit shall be demonstrated through the use of the monitors required by NSPS Subpart Db. The following conditions shall apply to all CEMS (Boiler 3, 4, or combined stack) for non-NSPS opacity, SO\textsubscript{2}, NO\textsubscript{x}, and CO emission standards:

(1) The CEMS required by this permit shall be operated and data recorded during all periods of operation except for CEM breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(2) The 1-hour average SO\textsubscript{2}, NO\textsubscript{x}, and CO emission rates measured by the CEMS required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.

(3) For each hour of missing emission data (NO\textsubscript{x}, SO\textsubscript{2}, or CO), the owner or operator shall substitute data by:

A. If the monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the
following procedures:

i) For the missing data period less than or equal to 24 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.

ii) For a missing data period greater than 24 hours, substitute the greater of:
   (a) The 90th percentile hourly concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
   (b) The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.

B. If the monitor data availability is at least 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:

i) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.

ii) For the missing data period of more than 8 hours, substitute the greater of:
   (a) The 95th percentile hourly pollutant concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
   (b) The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.

C. If the monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method approved by the Department.

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

Authority for Requirement: DNR Construction Permit 07-A-301-P2

Agency Approved Operation & Maintenance Plan Required?  Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required?  Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required?  Yes ☒ No ☐

See Appendix A

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP-199-5A

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit Number</th>
<th>Emission Unit Description</th>
<th>Control Equipment ID Number</th>
<th>Control Equipment Description</th>
<th>Raw Material</th>
<th>Rated Capacity (tons/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-199-ASH-5A</td>
<td>#3 Ash System-Conveying</td>
<td>CE 199-5A1</td>
<td>Primary Mechanical Collector</td>
<td>Coal Ash</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CE 199-5A2</td>
<td>Secondary Mechanical Collector</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>CE 199-5A3</td>
<td>Baghouse</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 %\(^{(1)}\)

\(^{(1)}\) 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).

Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 78-A-164-S1

Pollutant: Particulate Matter (PM\(_{10}\))
Emission Limit(s): 0.223 lbs/hr
Authority for Requirement: DNR Construction Permit 78-A-164-S1

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(1)"a"
DNR Construction Permit 78-A-164-S1

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 75
Stack Opening, (inches, dia.): 6
Exhaust Flow Rate (scfm): 1,300
Exhaust Temperature (°F): 70
Discharge Style: Downward
Authority for Requirement: DNR Construction Permit 78-A-164-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the
temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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

- **Agency Approved Operation & Maintenance Plan Required?** Yes ☒ No ☐
- **Facility Maintained Operation & Maintenance Plan Required?** Yes ☐ No ☒
- **Compliance Assurance Monitoring (CAM) Plan Required?** Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

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**Baghouse Agency Operation & Maintenance Plan**

Facility: University of Northern Iowa Power Plant  
EIQ Number: 92-5192  
Emission Unit: EU-199-ASH-5A, ASH SYSTEM -CONVEYING  
Emission Point: EP-199-ASH-5A  
Control Equipment: CE-199-5A Baghouse (Pulsed Air)

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**Monitoring Guidelines**

The University of Northern Iowa Power Plant is committed to taking timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation to normal, or to restore the indicator to normal range. An excursion does not necessarily indicate a violation of an applicable requirement. If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the exceedance to the department and conduct source testing within 90 days of the exceedance to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

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**MONITORING METHODS AND CORRECTIVE ACTION**

**General**  
Periodic Monitoring is not required during periods of time greater than one day in which Boiler 3 Ash System does not operate.
Routine Operations
Daily baghouse operating requirements include monitoring and evaluation of various parameters, recordkeeping, preventative maintenance, and the appropriate response to any malfunctions.

Preventative Maintenance
The power plant uses a computerized maintenance management system (CMMS) to schedule all preventive maintenance tasks and track corrective maintenance history. The following preventative maintenance tasks will be programmed into the CMMS and work orders generated for performing these maintenance tasks.

Weekly
- Inspect differential pressure across the bags. Confirm pressure is within the manufacturer's recommended operating range.
- Inspect compressed air pulsing system for any abnormal conditions.
- Inspect hopper gates and piping for signs of jamming, leaks, wear or broken parts.

Monthly
- Check cleaning sequence of the baghouse.
- Check operation of all inlet and outlet dampers.
- Check the hoppers function and performance.

Annually
- Inspect baghouse compartment during annual outage.

Equipment Monitoring Methods
Performance of the baghouse may be monitored by observing differential pressure readings at the baghouse. A baghouse leak detection system that provides an alarm is installed in the system. Alarms are provided on the control system operator interface for high baghouse differential pressure, general baghouse trouble and ash system trouble.

Recordkeeping and Reporting
Operational records will be kept and maintained at the power plant for a period of five years and will be available for review upon request by the DNR. Records to be kept include:
- Preventative and corrective maintenance history will be maintained in the power plant CMMS.
- Reports - Semi-annual reports will be generated that include times and duration of all instances of data recorded that were outside of an indicated performance range. The report will also include a certification that corrective actions were promptly taken or a statement that all readings were within the performance range.
- Submit all reports and petitions required by 40 CFR 60 to the Iowa DNR in order to demonstrate compliance with continuous emission monitoring.
- A spare parts inventory will be maintained at the facility.

Quality Control
The following quality control measures will be implemented in association with the operation of the boiler 3 ash system baghouse:
- All instruments and equipment will be calibrated, maintained, and operated according to manufacturer specifications.
• Any visible emission in excess of 10 percent, except for one six-minute period per hour of not more than 20 percent, will be reported and corrective action will be taken to correct the problem.

This Operation and Maintenance Plan will be available for review at the power plant.

Authority for Requirement:  567 IAC 22.108(3)
Emission Point ID Number: EP-199-5B

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity (tons/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUF-199-ASH-5B #3 Ash System-Silo Coal Ash</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): No Visible Emissions (1)
(1) No visible emissions shall be observed beyond the lot line.
Authority for Requirement: 567 IAC 23.3(2)"c"
DNR Construction Permit 07-A-302

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

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-199-5C

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity (tons/hr)</th>
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</thead>
<tbody>
<tr>
<td>EUF-199-ASH-5C</td>
<td>#3 Ash System-Truck Loading</td>
<td>Coal Ash</td>
<td>20</td>
</tr>
</tbody>
</table>

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): No Visible Emissions \(^{(1)}\)

\(^{(1)}\) No visible emissions shall be observed beyond the lot line.

Authority for Requirement: DNR Construction Permit 07-A-303

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons 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.

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

**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)

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point Number</th>
<th>Emission Unit Number</th>
<th>Control Equipment ID Number</th>
<th>Control Equipment Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-6A</td>
<td>EU-199-ASH-6A</td>
<td>CE 199-6A1</td>
<td>Primary Mechanical Collector Baghouse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CE 199-6A2</td>
<td></td>
</tr>
<tr>
<td>EP-199-6B</td>
<td>EU-199-ASH-6B</td>
<td>CE 199-6B</td>
<td>Baghouse</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>EP</th>
<th>Opacity</th>
<th>Particulate Matter (PM(_{10}))</th>
<th>Particulate Matter (PM) 567 IAC 23.3(2)&quot;a&quot;</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-6A</td>
<td>No Visible Emissions (1)</td>
<td>0.244 lbs/hr</td>
<td>0.1 gr/scf</td>
<td>DNR Construction Permit 07-A-304-P1</td>
</tr>
<tr>
<td>EP-199-6B</td>
<td>No Visible Emissions (1)</td>
<td>0.097 lbs/hr</td>
<td>0.1 gr/scf</td>
<td>DNR Construction Permit 07-A-305-P1</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>EP</th>
<th>Opacity</th>
<th>Particulate Matter (PM(_{10}))</th>
<th>Particulate Matter (PM) - (State)</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-6A</td>
<td>No Visible Emissions (2)</td>
<td>0.005 gr/dscf</td>
<td>0.005 gr/dscf</td>
<td>DNR Construction Permit 07-A-304-P1</td>
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<tr>
<td>EP-199-6B</td>
<td>No Visible Emissions (2)</td>
<td>0.005 gr/dscf</td>
<td>0.005 gr/dscf</td>
<td>DNR Construction Permit 07-A-305-P1</td>
</tr>
</tbody>
</table>
**Emission Point Characteristics**

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

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Stack Height, (ft, from the ground)</th>
<th>Stack Opening, (inches, dia.)</th>
<th>Exhaust Flow Rate (scfm)</th>
<th>Exhaust Temperature (°F)</th>
<th>Discharge Style</th>
<th>Authority for Requirement</th>
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</thead>
<tbody>
<tr>
<td>EP-199-6A</td>
<td>16</td>
<td>8</td>
<td>1,400</td>
<td>70</td>
<td>Horizontal</td>
<td>DNR Construction Permit 07-A-304-P1</td>
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<tr>
<td>EP-199-6B</td>
<td>70</td>
<td>6</td>
<td>1,100</td>
<td>70</td>
<td>Horizontal</td>
<td>DNR Construction Permit 07-A-305-P1</td>
</tr>
</tbody>
</table>

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

**Opacity Monitoring:**
Visible emissions shall be observed on a weekly basis to ensure none occur when the emission unit on this emission point is at or near full capacity. If visible emissions are observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake visible emissions readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Maintain a written record of the observation and any action resulting from the observation for a minimum of five years.

**Agency Approved Operation & Maintenance Plan Required?**

| Yes ☐  No ☑ |

**Facility Maintained Operation & Maintenance Plan Required?**

| Yes ☑  No ☐ |

**Compliance Assurance Monitoring (CAM) Plan Required?**

| Yes ☐  No ☑ |

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

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

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Numbers: EP-199-6C

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity (tons/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-6C</td>
<td>EUF-199-ASH-6C</td>
<td>#4 Ash System-Silo Truck Loading</td>
<td>Coal Ash</td>
<td>650</td>
</tr>
</tbody>
</table>

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): No Visible Emissions (1)
(1) No visible emissions shall be observed beyond the lot line.
Authority for Requirement: DNR Construction Permit 07-A-306-P

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons 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.

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

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

Operating Limits:
Operating limits for this emission unit shall be:

A. The following conditions are required to meet the BACT work practice:

(1) Fugitive emissions shall be controlled by applying a dust suppressant. A control efficiency of 95% shall be maintained. UNI may elect to use any dust suppressant that is capable of achieving the 95% control efficiency. In the event that the manufacturer or distributor of a dust suppressant recommends different amounts of dust suppressant or UNI chooses to use a different dust suppressant, UNI shall notify DNR of the change in application rates and/or dust suppressant and the manufacturer’s/distributor’s recommendations.
(2) If the selected dust suppressant cannot be applied because the ambient air temperature (as measured at the facility during operating hours) will be less than 35°F (1.7°C) or other conditions due to weather cause the chemical dust suppressant to not be applied then the dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated.
Reporting & Record keeping:
All records as required by this permit shall be kept for a minimum of five (5) years. Records shall be legible and maintained in an orderly manner. These records shall show the following:

A. A log showing the following for the emission unit in this permit:
   (1) The date and size of the pile
   (2) Records of the applications shall be maintained and shall include:
       • The dates of each application,
       • The chemical dust suppressant used,
       • The application intensity (gal/yd²),
       • Dilution ratio,
       • The operator’s initials, and
       • Documentation of weather conditions, if necessary.
   (3) If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation.

Authority for Requirement:  DNR Construction Permit 07-A-306-P

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

Agency Approved Operation & Maintenance Plan Required?    Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required?    Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required?    Yes ☐ No ☒

Authority for Requirement:  567 IAC 22.108(3)
Emission Point ID Numbers: EP-199-7

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment ID Number</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-7</td>
<td>EU-199-LIME-7</td>
<td>#4 Limestone System - Silo Bin Vent</td>
<td>CE-199-7</td>
<td>Limestone</td>
<td>250 tons storage 17.1 tons/hr (silo input) 3000 lbs/hr (loadout to boiler)</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>EP</th>
<th>Opacity</th>
<th>PM$_{10}$</th>
<th>PM (State)</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-7</td>
<td>40% (¹)</td>
<td>0.199 lb/hr</td>
<td>0.1 gr/dscf</td>
<td>DNR Construction Permit 07-A-307-P1</td>
</tr>
</tbody>
</table>

(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).

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

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

<table>
<thead>
<tr>
<th>EP</th>
<th>Opacity</th>
<th>PM$_{10}$</th>
<th>PM (State)</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-7</td>
<td>5% (²)</td>
<td>0.005 gr/dscf</td>
<td>0.005 gr/dscf</td>
<td>DNR Construction Permit 07-A-307-P1</td>
</tr>
</tbody>
</table>

(²) One (1) hour average.

Operating Requirements and Associated Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. All records as required by this permit shall be kept for a minimum of five (5) years. Records shall be legible and maintained in an orderly manner.

A. The owner or operator shall keep records of control equipment inspections and maintenance.

Authority for Requirement: DNR Construction Permit 07-A-307-P1
Emission Point Characteristics
The emission point shall conform to the specifications listed below.

<table>
<thead>
<tr>
<th>EP</th>
<th>Stack Height, (ft, from the ground)</th>
<th>Stack Opening, (inches, dia.)</th>
<th>Exhaust Flow Rate (scfm)</th>
<th>Exhaust Temperature (°F)</th>
<th>Discharge Style</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-7</td>
<td>98</td>
<td>6</td>
<td>1,000</td>
<td>100</td>
<td>Horizontal</td>
<td>DNR Construction Permit 07-A-307-P1</td>
</tr>
</tbody>
</table>

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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

Opacity Monitoring:
The facility shall check for visible emissions weekly during a period when the emission unit on this emission point is in operation and record the observation. If weather conditions prevent the observer from conducting a visible emissions observation, the observer shall note such conditions on the data observation sheet. If visible emission observations are unsuccessful due to weather on a given day the visible emission observations will be attempted the following day. A visible emission observation shall be made the next day that weather conditions allow.

Observations shall be done to ensure that no visible emissions occur during the operation of the unit. 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 > 5% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions.

Maintain a written record of the observation and any action resulting from the observation for a minimum of 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 ☒
Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

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

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

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP-199-8A

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment ID Number</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity (tons/hr)</th>
</tr>
</thead>
</table>

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): 20 %
Authority for Requirement: 40 CFR 60 Subpart Y
567 IAC 23.1(2)v
DNR Construction Permit 92-A-656-S3

Pollutant: Particulate Matter (PM$_{10}$)
Emission Limit(s): 1.01 lb/hr
Authority for Requirement: DNR Construction Permit 92-A-656-S3

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf, 1.01 lb/hr
Authority for Requirement: DNR Construction Permit 92-A-656-S3
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.

NSPS and NESHAP Applicability

This emission unit is subject to Subparts A (General Provisions, 40 CFR §60.1 – 40 CFR §60.19) and Y (Standards of Performance for Coal Preparation Plants, 40 CFR §60.250 – 40 CFR §60.254) of the New Source Performance Standards (NSPS).

Authority for Requirement: DNR Construction Permit 92-A-656-S3
40 CFR 60 Subpart Y
567 IAC 23.1(2)v
40 CFR 60 Subpart A
567 IAC 23.1(2)
Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 109
Stack Opening, (inches): 18.5 x 27.375
Exhaust Flow Rate (scfm): 5,900
Exhaust Temperature (°F): 70
Discharge Style: Horizontal

Authority for Requirement: DNR Construction Permit 92-A-656-S3

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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

Opacity Monitoring:
The facility shall check for visible emissions weekly during a period when the emission unit on this emission point is in operation and record the observation. If weather conditions prevent the observer from conducting a visible emissions observation, the observer shall note such conditions on the data observation sheet. If visible emission observations are unsuccessful due to weather on a given day the visible emission observations will be attempted the following day. A visible emission observation shall be made the next day that weather conditions allow.

Observations shall be done to ensure that no visible emissions occur during the operation of the unit. 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 > 20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions.

Maintain a written record of the observation and any action resulting from the observation for a minimum of 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 ☐

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

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

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Numbers: EP-199-8B

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment ID Number</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-8B</td>
<td>EU-199-CHS-8B</td>
<td>Coal System - Bunker #3 Silo</td>
<td>CE-199-8B</td>
<td>Baghouse</td>
<td>Coal</td>
<td>27.4</td>
</tr>
</tbody>
</table>

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.*

<table>
<thead>
<tr>
<th>EP</th>
<th>Opacity</th>
<th>PM$_{10}$</th>
<th>PM (State)</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-8B</td>
<td>20%</td>
<td>0.244 lbs/hr</td>
<td>0.1 gr/scf</td>
<td>DNR Construction Permit 07-A-308-P1</td>
</tr>
</tbody>
</table>


**BACT Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
*The emissions from these emission points shall not exceed the levels specified below.*

<table>
<thead>
<tr>
<th>EP</th>
<th>Opacity</th>
<th>PM$_{10}$</th>
<th>PM (State)</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-8B</td>
<td>No Visible Emissions (No VE)</td>
<td>0.005 gr/dscf</td>
<td>0.005 gr/dscf</td>
<td>DNR Construction Permit 07-A-308-P1</td>
</tr>
</tbody>
</table>

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

**NSPS and NESHAP Applicability**

This emission unit is subject to Subparts A (General Provisions, 40 CFR §60.1 – 40 CFR §60.19) and Y (Standards of Performance for Coal Preparation Plants, 40 CFR §60.250 – 40 CFR §60.254) of the New Source Performance Standards (NSPS).

This emission unit is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) at this time.

Authority for Requirement: DNR Construction Permit 07-A-308-P1

40 CFR 60 Subpart Y
567 IAC 23.1(2)"v"
40 CFR 60 Subpart A
567 IAC 23.1(2)
Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 74
Stack Opening, (inches): 11 x 13
Exhaust Flow Rate (scfm): 2,600
Exhaust Temperature (°F): 70
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 07-A-308-P1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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

Opacity Monitoring:
Visible emissions shall be observed on a weekly basis to ensure none occur when the emission unit on this emission point is at or near full capacity. If visible emissions are observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake visible emissions readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Maintain a written record of the observation and any action resulting from the observation for a minimum of five years.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒
Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐
Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.
The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.
Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Numbers: EPF-199-9A, EPF-199-9D

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment ID Number</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPF-199-9D</td>
<td>EUF-199-COAL-9D</td>
<td>Coal Pile Reclaim Hopper</td>
<td>CE-199-9D</td>
<td>Building Enclosure</td>
<td>Coal</td>
<td>50,565</td>
</tr>
</tbody>
</table>

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): No Visible Emissions (1)
(1) No visible emissions shall be observed beyond the lot line.
Authority for Requirement: 567 IAC 23.3(2)"c"(1)
DNR Construction Permit 07-A-309-P2 and 07-A-312-P2

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons 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.

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

Operating Requirements and Associated Recordkeeping
The owner/operator of this equipment shall comply with the operational limits and requirements listed below. All records as required by this permit shall be kept for a minimum of five (5) years. Records shall be legible and maintained in an orderly manner.

A. Fugitive emissions from each coal pile shall be controlled by building enclosure which minimizes exposure of the storage pile to the wind. In the event, visible emissions are observed outside of the building, UNI shall utilize other control methods, such as a dust suppressant and/or tarp, which are capable of achieving 95% control efficiency. Visible emissions shall be observed daily during coal transfer operations, a log shall be maintained showing the following for these emission units in this permit:
   a. Date
   b. And visible emission observation result; please see Condition C. below for additional requirements when visible emissions are observed.
B. For every coal shipment received, the facility shall retain the supplier moisture content
analysis of the amount of moisture, in weight %, in the coal. In the event moisture content of
the coal as received is below 1.6%, UNI shall utilize other control methods, such as a dust
suppressant and/or tarp, which are capable of achieving 95% control efficiency. Please see
Condition C. below for additional requirements when the moisture content of the coal as
received is less than 1.6%.
C. If additional control methods are used, the following shall be recorded:
   a. The date of each application,
   b. Whether or not a tarp is being used,
   c. The chemical dust suppressant used,
   d. The application intensity (gal/yd²),
   e. Dilution ratio,
   f. The operator’s initials, and
   g. Documentation of weather conditions
D. The following records shall be kept monthly:
   a. Size of the pile, in tons


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

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒
Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒
Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Numbers: EPF-199-9B, EPF-199-9C

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity (tons/yr)</th>
</tr>
</thead>
</table>

**Applicable Requirements**

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

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

Pollutant: Opacity
Emission Limit(s): No Visible Emissions \(^{(1)}\)

\(^{(1)}\) No visible emissions shall be observed beyond the lot line.

Authority for Requirement: 567 IAC 23.3(2)"e"
DNR Construction Permit 07-A-310-P and 07-A-311-P

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons 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.

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

**Operational Limits & Requirements**

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

**Operating Limits:**
Operating limits for this emission unit shall be:

A. The following conditions are required to meet the BACT work practice:
   (1) For paved roads:
      (i) Fugitive emissions of paved haul roads shall be controlled to an effective control efficiency of 80% of the silt loading by either doing daily water flushing followed by sweeping or obtaining a sweeper that can meet a minimum of 80% control efficiency and doing daily sweeping. If UNI uses water flushing followed by sweeping to meet the 80% reduction of silt loading then it shall be achieved by water flushing followed by sweeping of the paved haul roads once per day with a water spray rate of a minimum of 0.23 gallons per square yard. (Note: the combination of paving the road and 80% control of the silt loading is equivalent to an overall control efficiency of 95 %.)
(ii) If water flushing followed by sweeping cannot be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35°F (1.7°C) or conditions due to weather, in combination with the application of the water, could create hazardous driving conditions, then the water flushing and sweeping shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the application have abated.

(iii) Water flushing and sweeping need not occur when a rain gage located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hr time period or the paved road(s) will not be used on a given day.

(2) For unpaved roads:

(i) Fugitive emissions from unpaved haul roads shall be controlled by applying a dust suppressant. A control efficiency of 95% shall be maintained on all haul roads. UNI may elect to use any dust suppressant that is capable of achieving the 95% control efficiency. In the event that the manufacturer or distributor of a dust suppressant recommends different amounts of dust suppressant or UNI chooses to use a different dust suppressant, UNI shall notify DNR of the change in application rates and/or chemical dust suppressant and the manufacturer’s/distributor’s recommendations.

(ii) If the selected chemical dust suppressant cannot be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35°F (1.7°C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated.

Reporting & Record keeping:
All records as required by this permit shall be kept for a minimum of five (5) years. Records shall be legible and maintained in an orderly manner. These records shall show the following:

A. A log showing the following for this emission unit:
   (1) The silt content of the road(s).
   (2) Paved roads:
      (i) Records of the applications shall be maintained and shall include
          • The dates of each application,
          • The amount of water applied,
          • The areas treated, and
          • The operator’s initials.
      (ii) If water is not applied when scheduled then the records should so indicate and provide an explanation.
   (3) Unpaved roads:
      (i) Records of the applications shall be maintained and shall include:
          • The dates of each application,
          • The dust suppressant used,
          • The application intensity (gal/yd²),
          • Dilution ratio,
          • The operator’s initials, and
          • Documentation of road and weather conditions, if necessary.
      (ii) If the selected dust suppressant is not applied as planned, then the records should so indicate and provide an explanation.
Authority for Requirement:  DNR Construction Permits 07-A-310-P and 07-A-311-P

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

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Yes ☐</th>
<th>No ☒</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Approved Operation &amp; Maintenance Plan Required?</td>
<td>Yes ☐</td>
<td>No ☒</td>
</tr>
<tr>
<td>Facility Maintained Operation &amp; Maintenance Plan Required?</td>
<td>Yes ☐</td>
<td>No ☒</td>
</tr>
<tr>
<td>Compliance Assurance Monitoring (CAM) Plan Required?</td>
<td>Yes ☐</td>
<td>No ☒</td>
</tr>
</tbody>
</table>

Authority for Requirement:  567 IAC 22.108(3)
Emission Point ID Numbers: EPF-199-10A, EPF-199-10B, EPF-199-10C

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPF-199-10A</td>
<td>EUF-199-COKE-10A</td>
<td>Petroleum Coke Receiving</td>
<td>Petroleum Coke</td>
<td>70,080 tons/yr</td>
</tr>
<tr>
<td>EPF-199-10B</td>
<td>EUF-199-COKE-10B</td>
<td>Petroleum Coke Pile</td>
<td>Vehicle Traffic</td>
<td>0.0189 VMT/hr</td>
</tr>
<tr>
<td>EPF-199-10C</td>
<td>EUF-199-COKE-10C</td>
<td>Petroleum Coke Reclaim</td>
<td>Petroleum Coke</td>
<td>70,080 tons/yr</td>
</tr>
</tbody>
</table>

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: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons 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.

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

**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-199-11

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity (gallons)</th>
</tr>
</thead>
</table>

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
The emissions from this emission point shall not exceed the levels specified below.

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

**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-199-12

Associated Equipment

<table>
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<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment ID Number</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-199-12</td>
<td>EU-199-DSI-12</td>
<td>DSI Silo #1</td>
<td>CE-199-12</td>
<td>Bin Vent Filter</td>
<td>Hydrated Lime</td>
<td>1,975 ft³ max capacity 50,000 lb/hr max loading</td>
</tr>
</tbody>
</table>

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: 567 IAC 23.3(2)"d"
DNR Construction Permit 15-A-300

(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$_{10}$)
Emission Limit(s): 0.22 lb/hr
Authority for Requirement: DNR Construction Permit 15-A-300

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.22 lb/hr; 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 15-A-300
567 IAC 23.3(2)"a"

**Operational Limits & Requirements**

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

Operating limits for this emission unit shall be:

A. The Bin Vent Filter (CE 199-12) shall be maintained according to the manufacturer’s 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. These records shall show the following:

A. The owner or operator shall maintain a record of all inspections of the Bin Vent Filter (CE 199-12). The owner or operator shall document the results of the inspections and note any
repairs that were the result of the inspections.

Authority for Requirement: DNR Construction Permit 92-A-656-S3

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 46  
Stack Opening, (inches): 38 x 38  
Exhaust Flow Rate (scfm): 960  
Exhaust Temperature (°F): 68  
Discharge Style: Horizontal

Authority for Requirement: DNR Construction Permit 92-A-656-S3

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

- **Agency Approved Operation & Maintenance Plan Required?** Yes ☐ No ☑
- **Facility Maintained Operation & Maintenance Plan Required?** Yes ☐ No ☑
- **Compliance Assurance Monitoring (CAM) Plan Required?** Yes ☐ No ☑

Authority for Requirement: 567 IAC 22.108(3)
IV. General Conditions
This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply
1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. 567 IAC 22.108(9)”a”
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. 567 IAC 22.105 (2)”h”(3)
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. 567 IAC 22.108 (1)”b”
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. 567 IAC 22.108 (14)
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. 567 IAC 22.108 (9)”b”
6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. 567 IAC 22.108(15)”c”

G2. Permit Expiration
1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source’s right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). 567 IAC 22.116(2)
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, Wallace State Office Building, 502 E 9th St., Des Moines, IA 50319-0034, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air 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 emissions inventory shall be submitted annually by March 31 with forms specified by the department documenting actual emissions for the previous calendar year.
4. The fee shall be submitted annually by July 1 with forms specified by the department.
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges
Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:
1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. 567 IAC 22.108 (15)"b"

G8. Duty to Provide Information
The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. 567 IAC 22.108 (9)"e"

G9. General Maintenance and Repair Duties
The owner or operator of any air emission source or control equipment shall:
1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. 567 IAC 24.2(1)

G10. Recordkeeping Requirements for Compliance Monitoring
1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
   a. The date, place and time of sampling or measurements
   b. The date the analyses were performed.
   c. The company or entity that performed the analyses.
   d. The analytical techniques or methods used.
   e. The results of such analyses; and
   f. The operating conditions as existing at the time of sampling or measurement.
   g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
   a. Comply with all terms and conditions of this permit specific to each alternative scenario.
   b. Maintain a log at the permitted facility of the scenario under which it is operating.
   c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. 567 IAC 22.108(4), 567 IAC 22.108(12)

G11. Evidence used in establishing that a violation has or is occurring.
Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein. 

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:
   a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
   b. Compliance test methods specified in 567 Chapter 25; or
   c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

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


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

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 725-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). 567 IAC Chapter 131-State Only

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. A variance from this subrule may be available as provided for in Iowa Code section 455B.143. In the case of an
electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting
   a. Initial Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exception 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. Exceedences of applicable emission rates are prohibited. “Held” in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. 567 IAC 22.108(7)

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

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
   a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
   b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
   c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
   d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.

d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)

e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

5. The permittee shall be allowed to switch from any ozone-depleting or greenhouse gas generating substances to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. 40 CFR part 82

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. 567 IAC 22.108(9)"c"

2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.

   a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;

   b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.

   c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. 567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"

3. A permit shall be reopened and revised under any of the following circumstances:

   a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992,
provided that the reopening may be stayed pending judicial review of that determination;
b. The department or the administrator determines that the Title V permit contains a
material mistake or that inaccurate statements were made in establishing the emissions
standards or other terms or conditions of the Title V permit;
c. Additional applicable requirements under the Act become applicable to a Title V
source, provided that the reopening on this ground is not required if the permit has a
remaining term of less than three years, the effective date of the requirement is later than
the date on which the permit is due to expire, or the additional applicable requirements
are implemented in a general permit that is applicable to the source and the source
receives approval for coverage under that general permit. Such a reopening shall be
complete not later than 18 months after promulgation of the applicable requirement.
d. Additional requirements, including excess emissions requirements, become applicable
to a Title IV affected source under the acid rain program. Upon approval by the
administrator, excess emissions offset plans shall be deemed to be incorporated into the
permit.
e. The department or the administrator determines that the permit must be revised or
revoked to ensure compliance by the source with the applicable requirements. 567 IAC
22.114(1)

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to
initial permit issuance and shall 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
- Wallace State Office Building
- 502 E 9th St.
- Des Moines, IA 50319-0034
- (515) 725-9545

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program. 567 IAC 25.1(7)”a”, 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes
The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the
occurrence of an emergency due to the effects of these contaminants on the health of persons.  
567 IAC 26.1(1)

G32. Contacts List
The current address and phone number for reports and notifications to the EPA administrator is:
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
Wallace State Office Building
502 E 9th St.
Des Moines, IA 50319-0034
(515) 725-8200

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

**Field Office 1**
909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

**Field Office 2**
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

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

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

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

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

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

**Linn County Public Health**
Air Quality Branch
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000
Appendix A: Compliance Assurance Monitoring (CAM) Plans

Boiler #3 Compliance Assurance Monitoring Plan
Baghouse for PM Control

I. Background

A. Emissions Unit:
   Description: Boiler 3 (Coal and #2 Fuel Oil)
   Identification: EU-199-BLR-3
   Facility: University of Northern Iowa Power Plant

B. Applicable Regulation, Emission Limit, and Monitoring Requirements:
   Regulation No.: DNR Construction Permit 07-A-301-P1
   Particulate emission limit: 58.3 lbs/hr (Federal), 0.2 lb/MMBtu (State)
   PM$_{10}$ Emission Limit: Combined stack emission limit 64.73 lb/hr
   Opacity emission limit: 40%
   Current Monitoring requirements: Stack Testing
   Baghouse alarms for high differential pressure, high inlet temperature, high outlet temperature and high ash hopper
   Main fan failure alarm
   COMS for Boiler MACT compliance

C. Control Technology:
   Baghouse (Reverse air and shaker)

II. Monitoring Approach

General Monitoring Guidelines
   • CAM involves the observation of control equipment compliance indicators: differential pressure across the baghouse and fan amperage. This plan defines acceptable ranges for these indicators. CAM also includes control equipment inspections when excursions of the indicator have taken place and possible corrective action and maintenance, if necessary.
   • Monitoring is not required during periods of time greater than one day in which the source does not operate.

Excursion from Compliance Indicators
   • An excursion occurs when an observed compliance indicator is outside of its defined acceptable indicator range during normal operations, not including startup and shutdown events. An excursion does not necessarily indicate a violation of applicable permit terms, conditions, and/or requirements. However, an excursion must be reported in the Annual Compliance Certification Report.
   • Corrective actions will begin as soon as possible, but no later than eight hours from the observation of the excursion.
<table>
<thead>
<tr>
<th></th>
<th>Indicator</th>
<th>Differential Pressure Across Baghouse</th>
<th>Fan Amperage</th>
</tr>
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</table>
| 2. Indicator Range | • An excursion is defined as a differential pressure reading across the baghouse outside 2.5” – 10” W. C.  
• Excursions trigger an inspection, corrective action and a recordkeeping requirement. | • Fan amperage above 100 indicates the fan is operating and the control device is not being bypassed. |
| 3. Performance Criteria | | |
| A. Data Representativeness | • An observation of the differential pressure below 2.5” W.C. or above 10” W.C. across the baghouse could reveal a decrease in the performance of the control equipment and potentially result in an increase of PM$_{10}$ emissions if corrective actions are not initiated. | Fan amperage is measured continuously at the fan by an ammeter. A reading below 100 could indicate improper fan operation or inadequate airflow to baghouse which could result in emissions bypassing the control device. |
| B. Recordkeeping and Reporting (Verification of Operational Status) | • Daily pressure drop readings  
• Record any excursions and corrective actions, inspections and maintenance resulting from readings outside the indicator range. | • Indicator lights identify control equipment bypass.  
• Record any excursions and corrective actions, inspections and maintenance resulting from fan amperage below indicator range. |
| C. QA/QC Practices and Criteria | • All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications. | Fans checked daily during inspection. Ammeter zeroed when unit not operating. |
| D. Monitoring Frequency | • The differential pressure will be monitored continuously when the baghouse is operating.  
• Alarms are activated on the control system operator interface for high baghouse differential pressure, high baghouse inlet and high baghouse outlet temperatures, and high ash hopper. | • Fan amps are monitored continuously and logged by operator once an hour.  
• Main fan failure alarm triggered if ID fan shuts down unexpectedly. |
|---|---|---|
| E. Data Collection Procedures | • Differential pressure readings are recorded in the plant information system and will be maintained for 5 years.  
• The power plant uses a computerized maintenance management system (CMMS) to schedule all preventive maintenance tasks and track corrective maintenance history.  
• Operator logs and maintenance records will be kept for 5 years. | • Fan amps monitored continuously. The operators log the reading once an hour.  
• The power plant uses a computerized maintenance management system (CMMS) to schedule all preventive maintenance tasks and track corrective maintenance history. Operator logs and maintenance records will be kept for 5 years. |
| F. Averaging Period | None | None |
Boiler #4 Compliance Assurance Monitoring Plan
Baghouse for PM and PM10 Control

I. Background

A. Emissions Unit:
   Description: Boiler 4 (Coal/Petroleum Coke/Natural Gas)
   Identification: EU-199-BLR-4
   Facility: University of Northern Iowa Power Plant

B. Applicable Regulation, Emission Limit, and Monitoring Requirements:
   Regulation No.: DNR Construction Permit 07-A-301-P1
   Particulate emission limit: 0.051 lb/MMBtu (Federal), 0.035 lb/MMBtu
   PM$_{10}$ Emission Limit: 0.033 lb/MMBtu
   Opacity emission limit: 20% 6-minute average except for one 6-minute period per hour of not more than 27%; 5% 1-hour average
   Current Monitoring requirements: Stack Testing
   Continuous opacity monitoring system (COMS)
   Baghouse alarms for high differential pressure, high inlet temperature, high outlet temperature and high ash hopper.

C. Control Technology: Baghouse (Pulsed air)

II. Monitoring Approach

General Monitoring Guidelines
   • CAM involves the observation of control equipment compliance indicators: differential pressure across the baghouse and one hour opacity average from the opacity monitor. This plan defines acceptable ranges for these indicators. CAM also includes control equipment inspections when excursions of the indicator have taken place and possible corrective action and maintenance, if necessary.
   • Monitoring is not required during periods of time greater than one day in which the source does not operate.

Excursion from Compliance Indicators
   • An excursion occurs when an observed compliance indicator is outside of its defined acceptable indicator range during normal operations, not including startup and shutdown events. An excursion does not necessarily indicate a violation of applicable permit terms, conditions, and/or requirements. However, an excursion must be reported in the Annual Compliance Certification Report.
   • Corrective actions will begin as soon as possible, but no later than eight hours from the observation of the excursion.
1. Indicator | Differential Pressure Across Baghouse | Continuous Opacity Monitoring System
--- | --- | ---
Measurement Approach | Daily inspection of differential pressure across the bags in the baghouse. | Six-Minute Opacity Average

2. Indicator Range
- An excursion is defined as a differential pressure reading across the baghouse outside 2.5” – 10” W. C.
- Excursions trigger an inspection, corrective action and a recordkeeping requirement.

2. Indicator Range
- An excursion is defined as six-minute opacity average that exceeds 10%, except for one six-minute period per hour of not more than 20%. Excursions trigger an inspection, corrective action and a recordkeeping requirement.

3. Performance Criteria

A. Data Representativeness
- An observation of the differential pressure below 2.5” W.C. or above 10” W.C. across the baghouse could reveal a decrease in the performance of the control equipment and potentially result in an increase of particulate emissions if corrective actions are not initiated.

A. Data Representativeness
- Install the COMS at a representative location in the baghouse exhaust per 40 CFR 60, Appendix B, Performance Specification 1 (PS-1).
- An observation of a six-minute opacity average greater than 10% could reveal a decrease in the performance of the control equipment and potentially result in an increase of particulate emissions if corrective actions are not initiated.

B. Recordkeeping and Reporting (Verification of Operational Status)
- Daily pressure drop readings
- Record any excursions and corrective actions, inspections and maintenance resulting from readings outside the indicator range.

B. Recordkeeping and Reporting (Verification of Operational Status)
- Whenever the opacity is greater than 10%, document the duration and cause if known, corrective actions taken and any inspections and maintenance conducted.
- Results of initial COMS performance evaluation conducted per PS-1 (February 1, 1991).
| C. QA/QC Practices and Criteria | • All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications. | • Install and evaluate the COMS per PS-1. The continuous opacity monitor will be automatically calibrated for zero and span adjustments daily. |
| D. Monitoring Frequency | • The differential pressure will be monitored continuously when the baghouse is operating.  
• Alarms are activated on the control system operator interface for high baghouse differential pressure, high baghouse inlet, high baghouse outlet temperatures, and high ash hopper. | • Record all excursion events.  
• Monitor the opacity of the baghouse exhaust continuously (every 10 seconds). |
| E. Data Collection Procedures | • Differential pressure readings are recorded in the plant information system and will be maintained for 5 years.  
• The power plant uses a computerized maintenance management system (CMMS) to schedule all preventive maintenance tasks and track corrective maintenance history.  
• Operator logs and maintenance records will be kept for 5 years. | • Set up the data acquisition system (DAS) to retain all 6-minute and hourly average opacity data.  
• Opacity reports will be kept for 5 years. |
| F. Averaging Period | • None | • Use the 10-second opacity data to calculate 6-minute averages. Use the 6-minute averages to calculate the hourly block average opacity. |
Appendix B: NSPS and NESHAP Weblinks

   https://www.ecfr.gov/cgi-bin/text-idx?mc=true&node=sp40.7.60.a&rgn=div6

B. 40 CFR 60 Subpart Db – Standards of Performance for Performance for Industrial-Commercial-Institutional Steam Generating Units.
   https://www.ecfr.gov/cgi-bin/text-idx?mc=true&node=sp40.7.60.d_0b&rgn=div6

C. 40 CFR 60 Subpart Y – Standards of Performance for Coal Preparation Plants and Processing Plants.
   https://www.ecfr.gov/cgi-bin/text-idx?mc=true&node=sp40.7.60.y&rgn=div6

   https://www.ecfr.gov/cgi-bin/text-idx?mc=true&node=sp40.11.63.a&rgn=div6

   https://www.ecfr.gov/cgi-bin/text-idx?mc=true&node=sp40.15.63.ddddd&rgn=div6