# Iowa Department of Natural Resources
# Title V Operating Permit

## Name of Permitted Facility: Glen-Gery Corporation - Adel
## Facility Location: 1831 W Main St, Adel, Iowa 50003
## Air Quality Operating Permit Number:
## Expiration Date:

**Permit Renewal Application Deadline:**

**EIQ Number: 92-4678**
**Facility File Number: 25-02-001**

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**Responsible Official**
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**Permit Contact Person for the Facility**
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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 24, and is issued subject to the terms and conditions contained in this permit.

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

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Marnie Stein, Supervisor of Air Operating Permits Section Date

# Table of Contents

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

**II. Plant - Wide Conditions** ..... **6**

**III. Emission Point Specific Conditions** ..... **9**

**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.
G12. Prevention of Accidental Release: Risk Management Plan Notification and 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: NSPS and NESHAP Web Links** ..... **62**
**Appendix B: Executive Order 10 (EO10) Rules Crosswalk** ..... **63**

# Abbreviations

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

Pollutants
PM.....particulate matter
$PM_{10}$.....particulate matter ten microns or less in diameter
$SO_2$.....sulfur dioxide
$NO_x$ .....nitrogen oxides
VOC.....volatile organic compound
CO.....carbon monoxide
HAP .....hazardous air pollutant

# I. Facility Description and Equipment List

Facility Name: Glen-Gery Corporation - Adel
Permit Number:

Facility Description: Brick and Structural Clay Tile (SIC 3251)

## Equipment List

| Emission Point Number | Emission Unit Number | Emission Unit Description | Construction Permit Number |
|---|---|---|---|
| EP-5 | EU-5 | Grinding and Screening of Clay | NA |
| EP-6 | EU-6 | Brick Crusher | NA |
| EP-7 | EU-7 | Haul Road | NA |
| EP-8 | EU-8 | Stockpiles | NA |
| EP-9 | EU-9 | Tunnel Kiln | 00-A-654-S3 |
| EP-10 | EU-10 | Dryer | 00-A-655-S2 |
| EP-12 | EU-12 | Special Shapes Dryer | 00-A-656 |
| EP-14 | EU-14 | Conveyor | 00-A-657 |
| EP-15 | EU-15 | Tunnel Kiln | 23-A-068 |
| EP-16 | EU-16 | Tunnel Dryer | 05-A-891-S2 |
| EP-20 | EU-20 | Sand Dryer | 10-A-553 |
| EP-21 | EU-21 | Hydrated Lime Silo | 14-A-570 |
| EP-22 | EU-22 | Hydrated Lime Silo | 14-A-571 |
| EP-23 | EU-23a | Silica Sand Silos | 14-A-572 |
| | EU-23b | | |
| EP-24 | EU-24 | Silica Sand Silo | 14-A-573 |

# Insignificant Activities Equipment List

| Insignificant Emission Unit Number | Insignificant Emission Unit Description |
|---|---|
| EU-2(i) | Space Heater - Clay Storage Building (200,000 Btu/hr) |
| EU-3(i) | Space Heater - Stretch Wrap Building (200,000 Btu/hr) |
| EU-7(i) | Space Heater - Round Sample Room (14,000 Btu/hr) |
| EU-8(i) | Space Heater - Motor Shop (160,000 Btu/hr) |
| EU-9(i) | Space Heater - Old Sample Room (110,000 Btu/hr) |
| EU-10(i) | Space Heater - Sample Room (105,000 Btu/hr) |
| EU-11(i) | Sample Room/Restroom Water Heater (34,000 Btu/hr) |
| EU-12(i) | Space Heater - Men's Restroom (60,000 Btu/hr) |
| EU-13(i) | Space Heater - Women's Restroom (24,000 Btu/hr) |
| EU-14(i) | Octagon Furnace (60,000 Btu/hr) |
| EU-15(i) | Prior Plant Office Furnace (81,000 Btu/hr) |
| EU-16(i) | Sawroom Furnace (250,000 Btu/hr) |
| EU-17(i) | Sawroom Furnace (300,000 Btu/hr) |
| EU-18(i) | New Plant Office Furnace (200,000 Btu/hr) |
| EU-19(i) | Maintenance Shop Furnace (200,000 Btu/hr) |
| EU-20(i) | Diesel Fuel Tank (20,000 gallons) |
| EU-21(i) | Diesel Fuel Tank (20,000 gallons) |
| EU-24(i) | Gasoline Tank (300 gallons) |
| EU-5(i) | Batt Belt - Monorail New Plant |
| EU-6(i) | Batt Belt - Used to Remove Brick |
| EU-22(i) | Propane Tank (30,000 gallons) |
| EU-23(i) | Propane Tank (18,000 gallons) |

# II. Plant-Wide Conditions

Facility Name: Glen-Gery Corporation - Adel
Permit Number:

Permit conditions are established in accord with 567 Iowa Administrative Code rule 24.108. When 567 IAC as amended May 15, 2024, and cited in this permit becomes State Implementation Plan (SIP) approved, it will supersede 567 IAC as amended February 8, 2023. Prior to May 15, 2024, all Title V rule citations in this Title V permit were found and cited in 567 IAC Chapter 22. During the period from May 15, 2024, to the date that 567 IAC as amended May 15, 2024, is approved into the SIP, both 567 IAC as amended May 15, 2024 and 567 IAC as amended February 8, 2023 form the legal basis for the applicable requirements included in this permit. A crosswalk showing the citation changes is attached to this permit in Appendix B.

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**Permit Duration**

The term of this permit is: 5 years
Commencing on:
Ending on:

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 24.110 - 24.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 24.115.

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

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

Sulfur Dioxide ($SO_2$): 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 the equation provided in

23.3(2)"a"(2) or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a"

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

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

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

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**40 CFR 60 Subpart A Requirements**

This facility is an affected source and these *General Provisions* apply to the facility. The affected unit is EU-14. Applicable requirements are incorporated in the Emission Point Specific conditions. See Appendix for a link to the Standard.

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

**40 CFR 60 Subpart OOO Requirements**

Emission unit EU-14 is subject to the New Source Performance Standards (NSPS) Subpart OOO – Standards of Performance for *Nonmetallic Mineral Processing Plants.* Applicable subpart OOO requirements are incorporated into this permit. See the Appendix for a link to the Standard.

Authority for Requirements: 40 CFR 60 Subpart OOO
567 IAC 23.1(2)"bbb"

# III. Emission Point-Specific Conditions

Facility Name: Glen-Gery Corporation - Adel
Permit Number:

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## Emission Point ID Number: EP-5 (fugitive)

Associated Equipment

Associated Emission Unit ID Number: EU-5

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Emission Unit vented through this Emission Point: EU-5
Emission Unit Description: Grinding and Screening of Clay
Raw Material/Fuel: Clay
Rated Capacity: 100 ton/hr

## Applicable Requirements

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

Pollutant: Fugitive Dust
Emission Limit(s): 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 24.108(3)

## Emission Point ID Number: EP-6 (fugitive)

Associated Equipment

Associated Emission Unit ID Number: EU-6

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Emission Unit vented through this Emission Point: EU-6
Emission Unit Description: Brick Crusher
Raw Material/Fuel: Clay
Rated Capacity: 125 ton/hr

## Applicable Requirements

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

Pollutant: Fugitive Dust
Emission Limit(s): 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 24.108(3)

## Emission Point ID Number: EP-7 (fugitive)

Associated Equipment

Associated Emission Unit ID Numbers: EU-7

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Emission Unit vented through this Emission Point: EU-7
Emission Unit Description: Haul Road
Raw Material/Fuel: Clay
Rated Capacity: 2 Vehicle Miles Traveled per hour

## Applicable Requirements

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

Pollutant: Fugitive Dust
Emission Limit(s): 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 24.108(3)

## Emission Point ID Number: EP-8 (fugitive)

Associated Equipment

Associated Emission Unit ID Number: EU-8

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Emission Unit vented through this Emission Point: EU-8
Emission Unit Description: Stockpiles
Raw Material/Fuel: Clay
Rated Capacity: 33.96 ton/hr

## Applicable Requirements

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

Pollutant: Fugitive Dust
Emission Limit(s): 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 24.108(3)

## Emission Point ID Number: EP-9

Associated Equipment

Table 1:

| Emission Point | Emission Unit | Emission Unit Description | Raw Material/ Fuel | Rated Capacity |
|---|---|---|---|---|
| EP-9 | EU-9 | Tunnel Kiln | Clay/Shale | 14.5 tons/hr |
| | | Preheat Burners | Natural Gas | 41 MMBTU/hr (total) |
| | | Top (pulse) Burners | Natural Gas | 25.5 MMBTU/hr (total) |

Emissions Control Equipment ID Number: CE-9
Emissions Control Equipment Description: Dry Limestone Adsorber

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## Applicable Requirements

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit: 00-A-654-S3
567 IAC 23.3(2)"d"

[(1)] If visible emissions are observed the owner or operator is required 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 2.5 (PM2.5)
Emission Limit(s): 0.86 lb/hr
Authority for Requirement: DNR Construction Permit: 00-A-654-S3

Pollutant: Particulate Matter 10 (PM10)
Emission Limit(s): 0.94 lb/hr
Authority for Requirement: DNR Construction Permit: 00-A-654-S3

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 6.40 lb/hr, 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit: 00-A-654-S3
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide ($SO_2$)
Emission Limit(s): 16.42 lb/hr, 500 ppm
Authority for Requirement: DNR Construction Permit: 00-A-654-S3
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides ($NO_X$)
Emission Limit(s): 6.34 lb/hr
Authority for Requirement: DNR Construction Permit: 00-A-654-S3

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 17.40 lb/hr
Authority for Requirement: DNR Construction Permit: 00-A-654-S3

Pollutant: Hydrogen Chloride (HCl)
Emission Limit(s): 1.10 lb/hr, 4.38 ton/yr
Authority for Requirement: DNR Construction Permit: 00-A-654-S3

Pollutant: Hydrogen Fluoride (HF)
Emission Limit(s): 1.30 lb/hr, 5.17 ton/yr
Authority for Requirement: DNR Construction Permit: 00-A-654-S3

**Operating Requirements with Associated Monitoring and Recordkeeping**

All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

A. The kiln burners are limited to combusting only natural gas or propane.
B. The owner or operator shall maintain the following daily records:
   1. The owner or operator shall monitor and record the total Tunnel Kiln (EU-9) brick production on a daily basis (tons brick/day).
   2. The HF and HCl emissions factors (lb pollutant/ton brick) derived from the most recent required performance test for the Tunnel Kiln (EU-9).
C. The owner or operator shall maintain the following monthly records:
   (1) The owner or operator shall monitor and record the total Tunnel Kiln (EU-9) brick production on a monthly basis (tons brick/day).
   (2) The facility shall calculate total monthly Tunnel Kiln (EU-9) HCl emissions (tons) by multiplying the HCl emissions factor (lb HCl/ton brick) derived during Tunnel Kiln (EU-9) compliance testing by the monthly Tunnel Kiln (EU-9) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).
   (3) The 12-month rolling total of the amount of HCL emissions from Tunnel Kiln (EU-9), in tons.
   (4) The facility shall calculate total Tunnel Kiln (EU-9) HF emissions (tons) by multiplying the HF emissions factor (lb HF/ton brick) derived during Tunnel Kiln (EU-9) compliance testing by the monthly Tunnel Kiln (EU-9) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).
   (5) The 12-month rolling total of the amount of HF emissions from Tunnel Kiln (EU-9), in tons.
D. If the 12-month rolling total of HCL emissions exceeds 3.50 tons for the Tunnel Kiln (EU-9), the permittee shall immediately begin keeping the following daily records:
   1. The facility shall calculate total daily Tunnel Kiln (EU-9) HCl emissions (tons) by multiplying the HCl emissions factor (lb HCl/ton brick) derived during Tunnel Kiln (EU-9) compliance testing by the daily Tunnel Kiln (EU-9) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).

2. The 365-day rolling total of the amount of HF emissions from Tunnel Kiln (EU-9), in tons. Daily calculations of all HCL emissions shall continue until the 365-day rolling total of the amount of all HCl emissions from Tunnel Kiln (EU-9) drops below 3.50 tons for the remainder of the current calendar month plus one additional calendar month. At that time, rolling daily calculation of HCl emissions will cease per this condition of the permit. If the emissions once again exceed 3.50 tons, daily recordkeeping will be required per this condition of the permit.

E. If the 12-month rolling total of HF emissions exceeds 4.15 tons for the Tunnel Kiln (EU-9), the permittee shall immediately begin keeping the following daily records:
   (1) The facility shall calculate total daily Tunnel Kiln (EU-9) HF emissions (tons) by multiplying the HF emissions factor (lb HCl/ton brick) derived during Tunnel Kiln (EU-9) compliance testing by the daily Tunnel Kiln (EU-9) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).
   (2) The 365-day rolling total of the amount of HF emissions from Tunnel Kiln (EU-9), in tons. Daily calculations of all HF emissions shall continue until the 365-day rolling total of the amount of all HF emissions from Tunnel Kiln (EU-9) drops below 4.15 tons for the remainder of the current calendar month plus one additional calendar month. At that time, rolling daily calculation of HF emissions will cease per this condition of the permit. If the emissions once again exceed 4.15 tons, daily recordkeeping will be required per this condition of the permit.

F. The owner or operator shall perform the following monitoring for the sulfur, fluorine, and chlorine content of the clay used:
   (1) Determine and record the sulfur, fluorine, and chlorine content of the clay used in the bricks during the required performance test through a laboratory analysis.
   (2) During each calendar year take a minimum of one (1) random sample from each clay stockpile to be analyzed using a laboratory analysis.
   (3) Determine and record the clay sulfur, fluorine, and chlorine content based on the testing of the sample(s) required above.
   (4) If the sulfur, fluorine, or chlorine content from the random samples is greater than 110% of the sulfur, fluorine, and chlorine content of the clay used during the most recent required performance test the owner or operator shall notify the Department within thirty (30) days of discovery at which point the Department will determine whether additional compliance testing is required.

G. The owner or operator shall maintain an adequate amount of limestone in the hopper feeding the Dry Limestone Adsorber (DLA) at all times.
   1. The owner or operator shall record if the DLA contains an adequate level of limestone in the limestone feed hopper once per calendar day.

H. The limestone discharge rate setting of the DLA shall be maintained at or above the discharge rate setting, established during the most recent stack testing.
   (1) The owner or operator shall properly operate and maintain equipment to monitor the limestone discharge rate setting to the DLA. The monitoring device shall be operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per written facility specific operation and maintenance plan
   (1) The limestone discharge rate is determined by the extraction screw on/off time settings and the peeling drum on/off time settings. These time settings determine the discharge rate of the DLA. The owner or operator shall record the extraction screw on/off time settings and peeling drum on/off time settings at least once per day to confirm they are set at or above the settings established during the most recent performance stack testing.
   (2) The owner or operator shall record the extraction screw on/off time settings and peeling drum on/off settings during each required performance test and maintain a copy of the results.

I. The owner or operator shall use the same grade of limestone that was used during the most recent stack testing.
   (1) The owner or operator shall maintain records of the source and grade of limestone used.

J. The pressure drop across the DLA shall be maintained between 0.2 and 3.0 inches water column.
   (1) The owner or operator shall properly operate and maintain equipment to monitor the pressure drop across the DLA. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per written facility specific operation and maintenance plan.
   (2) The owner or operator shall record the pressure drop across the DLA in inches of water column once per calendar day. This record shall be made available to the Department. If the pressure drop across the DLA falls outside the range specified above, the owner or operator shall investigate the DLA and make corrections to it. This requirement shall not apply on the days the Tunnel Kiln (EU-9) is not in operation.

K. The owner or operator shall operate and maintain the Tunnel Kiln (EU-9) and the DLA (CE-9) according to the manufacturer's specifications with inspections occurring at a minimum of once per year. The owner or operator shall maintain a log of all maintenance and inspection activities performed on the Tunnel Kiln (EU-9) and the DLA (CE-9). This log shall include, but is not necessarily limited to:
   (1) The date and time any inspection and/or maintenance was performed on the Tunnel Kiln (EU-9) and/or DLA (CE-9);
   (2) Any issues identified during the inspection and the date each issue was resolved;
   (3) Any issues addressed during the maintenance activities and the date each issue was resolved;
   (4) Identification of the staff member performing the maintenance or inspection

Authority for Requirement: DNR Construction Permit: 00-A-654-S3

**Compliance Plan**

*The owner/operator of this equipment shall comply with following compliance plan that was submitted by the facility.*

EP-9 and EP-10 are idle. Once restarted, the facility will:

- Provide the IADNR a 15-day notice upon the startup date of EU-9 & EU-10.
- Complete emissions testing on EU-9 & EU-10 within 60 days after the startup date.
- Provide the IADNR a test protocol no later than 15-days before conducting emissions testing.

**Description**

Units may be shut down. Upon startup, they will need to follow the compliance plan

Emission Point EP-9 (Tunnel Kiln #1): Upon startup, testing of Opacity, PM2.5, PM10, SO2, NOx, CO, HCL, and HF as required by DNR Construction Permit 00-A-654-S3.

Emission Unit EP-10 (Dryer) is being retested for PM2.5 and PM10 as required by DNR Construction Permit 00-A-655-S2

**Condition**

The permittee entered a temporary shutdown period with the Tunnel Kiln #1 and Dryer.
Upon startup, the facility will follow the compliance plan for notification and testing.

Authority for Requirement: 567 IAC 24.108(15)

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

Stack Height, (ft, from the ground): 72
Stack Opening, (inches, dia.): 46
Exhaust Flow Rate (scfm): 20,550
Exhaust Temperature (°F): 502
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 00-A-654-S3

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

**Monitoring Requirements**

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

**Stack Testing:** Upon starting these units, tests will need to take place. As mentioned in the compliance plan.

| Pollutant | First Stack Test | Second Stack Test | Test Method |
|---|---|---|---|
| Particulate Matter 2.5 (PM2.5) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |
| Particulate Matter 10 (PM10) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |
| Sulfur Dioxide (SO2) | Initial | Every 5 years | 40 CFR 60, Appendix A, Method 6C |
| Carbon Monoxide (CO) | Initial | Every 5 years | 40 CFR 60, Appendix A, Method 10 |
| Hydrogen Chloride (HCl) | Initial | Every 5 years | 40 CFR 63, Appendix A, Method 320 OR 40 CFR 60, Appendix A, Method 26A |
| Hydrogen Fluoride (HF) | Initial | Every 5 years | 40 CFR 63, Appendix A, Method 320 OR 40 CFR 60, Appendix A, Method 26A |

Authority for Requirement – DNR Construction Permit: 00-A-654-S3

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 21.10(7)*

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

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

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

Authority for Requirement: 567 IAC 24.108(3)

# EU-9 Tunnel Kiln 1 Agency
# O&M Plan

## I. BACKGROUND

### A. Emissions Unit

Description: Ceric Tunnel Kiln controlled by a Dry Limestone Adsorber (DLA)
Identification: EU-9, CE-9
Facility: Glen-Gery Corporation, Adel Facility, Adel, Iowa

### B. Applicable Regulations, Emission Limit, and Monitoring Requirements

Regulation No.: Iowa DNR Construction Permit 00-A-654-S3

| | |
|---|---|
| Emission Limits: | 1.30 lb HF/hour and 5.17 tons HF/year<br>1.10 lb HCl/hour and 4.38 tons HCl/year |
| Monitoring Requirements: | DLA pressure drop<br>DLA limestone extraction screw setting<br>DLA peeling drum setting<br>Limestone feed hopper level<br>Grade of limestone |

### C. Control Technology

Dry Limestone Adsorber (DLA)

## II. MONITORING APPROACH

The key elements of the monitoring approach are presented below:

### A. Indicator

DLA pressure drop
DLA limestone extraction screw setting
DLA limestone peeling drum setting
Limestone feed hopper level

### B. Measurement Approach

The permittee shall maintain the following monitoring devices:

- Device designed to monitor the pressure drop across DLA;
- Device to monitor the limestone extraction screw setting on the DLA;
- Device to monitor the limestone peeling drum setting on the DLA; and
- Device to monitor limestone level in feed hopper.

**C. Indicator Range**

- DLA pressure drop shall be within normal parameters for the brick product being produced, between 0.2 and 3.0 inches of water column.
- Limestone extraction screw shall operate a minimum number of minutes per hour while kiln is operating. The extraction screw setting is recorded during the performance test and used to indicate that the limestone discharge rate is at or above the rate established during the most recent performance testing
- Limestone peeling drum shall operate a minimum number of minutes per hour while kiln is operating. The peeling drum setting is recorded during the performance test and used to indicate that the limestone discharge rate is at or above the rate established during the most recent performance testing.
- Limestone level in the feed hopper shall be at or above the minimum level required for normal operations.

**D. Performance Criteria**

Data Representativeness:

- An analog pressure differential measurement device (Magnehelic or equivalent) shall measure the pressure differential across the DLA via measurement ports installed at the inlet and outlet of the DLA.
- The rate of limestone extraction from the DLA shall be manually set to a fixed rate established during performance testing. There is no associated gauge to measure the rate of extracted limestone.
- A storage bin level indicator device (ultrasonic or equivalent) shall continuously monitor the relative level of limestone in the DLA storage bin.

Verification of Operational Status:

- Verification of operational status of the monitoring systems and gauges shall be ensured through the installation, calibration, maintenance, and operation of each system in accordance with the manufacturer's recommended practice. Copies of the manufacturer's recommended practices shall be retained on file at the Facility. Operators shall confirm the status of the monitoring systems daily.

QA/QC Practices and Criteria:

- The monitoring equipment identified

| | |
|---|---|
| | in this plan shall be installed, operated, calibrated and maintained in accordance with the manufacturer's recommended practice. Copies of the manufacturer's recommended practices shall be retained on file at the Facility.<br>• Operators shall confirm the status of the monitoring systems daily. |
| Monitoring Frequency and Data: | • The DLA pressure drop shall be monitored continuously and checked and recorded daily (when in operation).<br>• The limestone extraction screw setting shall be checked and recorded daily (when in operation).<br>• The limestone feed hopper level shall be continuously monitored and checked and recorded daily (when in operation).<br>• The source and grade of limestone shall be verified and recorded with each receipt of shipment. |
| Collection Procedure: | The results of each inspection, calibration, maintenance and validation check shall be recorded. These records shall be maintained for five years from the date of each occurrence. |

## III. JUSTIFICATION

### A. Background

Tunnel Kiln 1 requires a Dry Limestone Adsorber (DLA) for HF and HCl emissions control.

### B. Rationale for Selection of Performance Indicator

The DLA is filled with crushed limestone, which travels from storage to the top of the DLA, down through the DLA to an extraction screw at the bottom. Exhaust gas from Tunnel Kiln 1 travels through the limestone. The surface of the limestone reacts with the HF and HCl in the kiln exhaust gas, thereby controlling HF and HCl emissions control from the kiln. Effective HF and HCl removal depends upon:

- Unimpeded airflow through the adsorber;
- Grade of limestone;
- Optimal limestone surface area in absorber; and
- Sufficient limestone throughput through the absorber to assure uninterrupted control.

**C. Rationale for Selection of Indicator Level**

- An out-of-range pressure differential across the DLA may indicate potential DLA malfunctions. Low pressure differential may indicate inadequate limestone levels. High pressure differential may indicate air flow blockage.
- If the flow of limestone to and from the DLA is too slow or the limestone supply falls below recommended levels, HF and HCl control efficiency may be impacted.
- If the available limestone in the system becomes too low, inadequate levels of limestone in the DLA may result in an impact to HCl and HF control efficiency.

## Emission Point ID Number: EP-10

Associated Equipment

Associated Emission Unit ID Number: EU-10

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Emission Unit vented through this Emission Point: EU-10
Emission Unit Description: Dryer
Raw Material/Fuel: Clay/Shale, Natural Gas
Rated Capacity: Dryer: 14.5 tons/hr
Burners (2): 8.0 MMBtu/hr total

## Applicable Requirements

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 00-A-655-S2
567 IAC 23.3(2)"d"

[(1)] If visible emissions are observed the owner or operator is required 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 2.5 (PM2.5)
Emission Limit(s): 1.03 lb/hr
Authority for Requirement: DNR Construction Permit 00-A-655-S2

Pollutant: Particulate Matter 10 (PM10)
Emission Limit(s): 1.25 lb/hr
Authority for Requirement: DNR Construction Permit 00-A-655-S2

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 3.0 lb/hr, 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 00-A-655-S2
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide ($SO_2$)
Emission Limit(s): 500 ppm
Authority for Requirement: DNR Construction Permit 00-A-655-S2
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides ($NO_X$)
Emission Limit(s): 1.78 lb/hr

Authority for Requirement: DNR Construction Permit 00-A-655-S2

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 4.50 lb/hr
Authority for Requirement: DNR Construction Permit 00-A-655-S2

Pollutant: Hydrogen Chloride (HCl)
Emission Limit(s): 0.03 lb/hr
Authority for Requirement: DNR Construction Permit 00-A-655-S2

Pollutant: Hydrogen Fluoride (HF)
Emission Limit(s): 0.07 lb/hr
Authority for Requirement: DNR Construction Permit 00-A-655-S2

**Operating Requirements with Associated Monitoring and Recordkeeping**

All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

A. The dryer burners are limited to combusting only natural gas or propane.
B. The owner or operator shall operate and maintain the emission unit (EU-10) according to the manufacturer's specifications with inspections occurring at a minimum of once per year. The owner or operator shall maintain a log of all maintenance and inspection activities performed on the emission unit (EU 10). This log shall include, but is not necessarily limited to:
   (1) The date and time any inspection and/or maintenance was performed on the emission unit (EU-10);
   (2) Any issues identified during the inspection and the date each issue was resolved;
   (3) Any issues addressed during the maintenance activities and the date each issue was resolved;
   (4) Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 00-A-655-S2

**Compliance Plan**

*The owner/operator of this equipment shall comply with following compliance plan that was submitted by the facility.*

EP-9 and EP-10 are idle. Once restarted, the facility will:

- Provide the IADNR a 15-day notice upon the startup date of EU-9 & EU-10.
- Complete emissions testing on EU-9 & EU-10 within 60 days after the startup date.
- Provide the IADNR a test protocol no later than 15-days before conducting emissions testing.

**Description**

Units may be shut down. Upon startup, they will need to follow the compliance plan

Emission Point EP-9 (Tunnel Kiln #1): Upon startup, testing of Opacity, PM2.5, PM10, SO2, NOx, CO, HCL, and HF as required by DNR Construction Permit 00-A-654-S3.

Emission Unit EP-10 (Dryer) is being retested for PM2.5 and PM10 as required by DNR Construction Permit 00-A-655-S2

**Condition**

The permittee entered a temporary shutdown period with the Tunnel Kiln #1 and Dryer.
Upon startup, the facility will follow the compliance plan for notification and testing.

Authority for Requirement: 567 IAC 24.108(15)

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

Stack Height, (ft, from the ground): 55
Stack Opening, (inches, dia.): 68
Exhaust Flow Rate (scfm): 49,280
Exhaust Temperature (°F): 108
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 00-A-655-S2

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

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

**Stack Testing:** Upon start up, stack tests will need to take place according to compliance plan.

| Pollutant | First Stack Test | Second Stack Test | Test Method |
|---|---|---|---|
| Particulate Matter 2.5 (PM2.5) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |
| Particulate Matter 10 (PM10) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |

Authority for Requirement: DNR Construction Permit 00-A-655-S2

*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 21.10(7)*

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

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

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

Authority for Requirement: 567 IAC 24.108(3)

## Emission Point ID Number: EP-12

Associated Equipment

Associated Emission Unit ID Number: EU-12

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Emission Unit vented through this Emission Point: EU-12
Emission Unit Description: Special Shapes Dryer
Raw Material/Fuel: Clay/Shale, Natural Gas
Rated Capacity: 0.33 tons/hr

## Applicable Requirements

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 00-A-656
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. The permit holder shall also file an "indicator opacity exceedance report" with the DNR field office and keep records as required in the policy. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter 10 (PM10)
Emission Limit(s): 0.1 lb/hr
Authority for Requirement: DNR Construction Permit 00-A-656

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 00-A-656
567 IAC 23.3(2)"a"

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

Stack Height, (ft, from the ground): 42
Stack Opening, (inches, dia.): 36
Exhaust Flow Rate (scfm): 16,300
Exhaust Temperature (°F): 108
Discharge Style: Vertical Obstructed
Authority for Requirement: DNR Construction Permit 00-A-656

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 24.108(3)

## Emission Point ID Number: EP-14

Associated Equipment

Associated Emission Unit ID Numbers: EU-14

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Emission Unit vented through this Emission Point: EU-14
Emission Unit Description: Conveyor
Raw Material/Fuel: Clay/Shale
Rated Capacity: 33.96 tons/yr

## Applicable Requirements

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

Pollutant: Opacity
Emission Limit(s): 10%
Authority for Requirement: DNR Construction Permit 00-A-657
40 CFR 60.672(b)

**Operating Requirements with Associated Monitoring and Recordkeeping**
All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

Follow the reporting requirements of NSPS subpart A-General Provisions.
Authority for Requirement: DNR Construction Permit 00-A-657
40 CFR 60 Subpart A
567 IAC 23.1(2)

**New Source Performance Standards (NSPS) Applicability**
This emission unit is subject to New Source Performance Standards (NSPS) Subpart OOO: Standards of Performance for Nonmetallic Mineral Processing Plants, and also subject to
Subpart A: General Provisions

Authority for Requirements: 40 CFR 60 Subpart OOO
567 IAC 23.1(2)"bbb"

**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 24.108(3)

## Emission Point ID Number: EP-15

Associated Equipment

Table 1:

| Emission Point | Emission Unit | Emission Unit Description | Raw Material/ Fuel | Rated Capacity |
|---|---|---|---|---|
| EP-15 | EU-15 | Tunnel Kiln | Clay/Shale | 16.37 tons/hr |
| | | Preheat Burners | Natural Gas | 41 MMBTU/hr (total) |
| | | Top (pulse) Burners | Natural Gas | 25.5 MMBTU/hr (total) |

Emissions Control Equipment ID Number: CE-15
Emissions Control Equipment Description: Dry Injection Fabric Filter (DIFF)

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## Applicable Requirements

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 23-A-068
567 IAC 23.3(2)"d"

[(1)] If visible emissions are observed the owner or operator is required 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 2.5 (PM2.5)
Emission Limit(s): 0.86 lb/hr
Authority for Requirement: DNR Construction Permit 23-A-068

Pollutant: Particulate Matter 10 (PM10)
Emission Limit(s): 0.94 lb/hr
Authority for Requirement: DNR Construction Permit 23-A-068

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 4.0 lb/hr, 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 23-A-068
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide ($SO_2$)
Emission Limit(s): 2.0 lb/hr, 500 ppmv
Authority for Requirement: DNR Construction Permit 23-A-068
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides ($NO_X$)
Emission Limit(s): 7.16 lb/hr
Authority for Requirement: DNR Construction Permit 23-A-068

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 17.40 lb/hr
Authority for Requirement: DNR Construction Permit 23-A-068

Pollutant: Hydrogen Chloride (HCl)
Emission Limit(s): 0.81 lb/hr, 3.5 tons/yr
Authority for Requirement: DNR Construction Permit 23-A-068

Pollutant: Hydrogen Fluoride (HF)
Emission Limit(s): 0.83 lb/hr, 3.56 tons/yr
Authority for Requirement: DNR Construction Permit 23-A-068

**Operating Requirements with Associated Monitoring and Recordkeeping**

All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

A. The kiln burners are limited to combusting only natural gas or propane.
B. The average hourly production rate of the Tunnel Kiln (EU-15) shall not exceed 14.5 tons per hour (tons/hr) calculated on a daily basis.
    1. The facility shall calculate and record the average hourly production rate (tons/hr) of the Tunnel Kiln (EU-15):
        (a) The facility shall record the amount of product produced by the Tunnel Kiln (EU-15), in pounds, on a daily basis;
        (b) The facility shall record the hours of operation for the Tunnel Kiln (EU-15), on a daily basis;
        (c) The facility shall calculate and record on a daily basis the average hourly production rate (tons/hr) of the Tunnel Kiln (EU-15) based on the daily amount of product produced and daily hours of operation.
C. The owner or operator shall maintain the following daily records:
    1. The owner or operator shall monitor and record the total Tunnel Kiln (EU-15) brick production on a daily basis (tons brick/day).
    2. The HF and HCl emissions factors (lb pollutant/ton brick) derived from the most recent required performance test for the Tunnel Kiln (EU-15).

D. The owner or operator shall maintain the following monthly records:
    1. The owner or operator shall monitor and record the total Tunnel Kiln (EU-15) brick production on a monthly basis (tons brick/day).
    2. The facility shall calculate total monthly Tunnel Kiln (EU-15) HCl emissions (tons) by multiplying the HCl emissions factor (lb HCl/ton brick) derived during Tunnel Kiln (EU-15) compliance testing by the monthly Tunnel Kiln (EU-15) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).

3. The 12-month rolling total of the amount of HCL emissions from Tunnel Kiln (EU-15), in tons.
4. The facility shall calculate total Tunnel Kiln (EU-15) HF emissions (tons) by multiplying the HF emissions factor (lb HF/ton brick) derived during Tunnel Kiln (EU-15) compliance testing by the monthly Tunnel Kiln (EU-15) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).
5. The 12-month rolling total of the amount of HF emissions from Tunnel Kiln (EU-15), in tons.

E. If the 12-month rolling total of HCL emissions exceeds 2.80 tons for the Tunnel Kiln (EU-15), the permittee shall immediately begin keeping the following daily records:
1. The facility shall calculate total daily Tunnel Kiln (EU-15) HCl emissions (tons) by multiplying the HCl emissions factor (lb HCl/ton brick) derived during Tunnel Kiln (EU-15) compliance testing by the daily Tunnel Kiln (EU-15) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).
2. The 365-day rolling total of the amount of HF emissions from Tunnel Kiln (EU-15), in tons. Daily calculations of all HCL emissions shall continue until the 365-day rolling total of the amount of all HCl emissions from Tunnel Kiln (EU-15) drops below 2.80 tons for the remainder of the current calendar month plus one additional calendar month. At that time, rolling daily calculation of HCl emissions will cease per this condition of the permit. If the emissions once again exceed 2.80 tons, daily recordkeeping will be required per this condition of the permit.

F. If the 12-month rolling total of HF emissions exceeds 2.85 tons for the Tunnel Kiln (EU-15), the permittee shall immediately begin keeping the following daily records:
1. The facility shall calculate total daily Tunnel Kiln (EU-15) HF emissions (tons) by multiplying the HF emissions factor (lb HCl/ton brick) derived during Tunnel Kiln (EU-15) compliance testing by the daily Tunnel Kiln (EU-15) brick production (tons brick/month) and dividing by 2000 (ton/2000 lb).
2. The 365-day rolling total of the amount of HF emissions from Tunnel Kiln (EU-15), in tons. Daily calculations of all HF emissions shall continue until the 365-day rolling total of the amount of all HF emissions from Tunnel Kiln (EU-15) drops below 2.85 tons for the remainder of the current calendar month plus one additional calendar month. At that time, rolling daily calculation of HF emissions will cease per this condition of the permit. If the emissions once again exceed 2.85 tons, daily recordkeeping will be required per this condition of the permit.

G. The owner or operator shall perform the following monitoring for the sulfur, fluorine, and chlorine content of the clay used:
1. Determine and record the sulfur, fluorine, and chlorine content of the clay used in the bricks during the required performance test through a laboratory analysis.
2. During each calendar year take a minimum of one (1) random sample from each clay stockpile to be analyzed using the method approved by the Department.
3. Determine and record the clay sulfur, fluorine, and chlorine content based on the testing of the sample(s) required above.
4. If the sulfur, fluorine, or chlorine content from the random samples is greater than 110% the sulfur, fluorine, and chlorine content of the clay used during the most recent required performance test the owner or operator shall notify the Department within thirty (30) days of discovery at which point the Department will determine whether additional compliance testing is required.

H. The owner or operator shall maintain an adequate amount of lime in the hopper feeding the Dry Injection Fabric Filter (DIFF), CE-15, at all times.
1. The owner or operator shall record if the DIFF contains an adequate of level of lime in the feed hopper once per calendar day.

I. The lime feed rate setting of the DIFF shall be maintained at or above the feed rate setting established during the most recent stack testing.
   1. The owner or operator shall properly operate and maintain equipment to monitor the lime feed rate setting to the DIFF. The DIFF shall be operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per written facility specific operation and maintenance plan.
   2. The owner and operator shall collect and record the lime feed rate setting in hertz (Hz) at least once per day. This feed screw rate setting determines the lime injection feed rate.
   3. If the lime feed rate setting of the DIFF falls below the setting determined during the most recent stack or the DIFF is bypassed during normal operation, the owner or operator shall investigate the lime feed rate of the DIFF and make corrections to it. The owner or operator shall maintain a record of all corrective actions taken. This requirement shall not apply on the days the Tunnel Kiln (EU 15) is not in operation.
   4. The owner or operator shall record the lime feed rate setting during each required performance test and maintain a copy of the results.

J. The pressure drop across the DIFF (CE-15) shall be maintained between 2.0 and 8.0 inches water column.
   1. The owner or operator shall properly operate and maintain equipment to monitor the pressure drop across the DIFF. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per written facility specific operation and maintenance plan.
   2. The owner or operator shall record the pressure drop across the DIFF in inches of water column once per calendar day. This record shall be made available to the Department. If the pressure drop across the DIFF falls outside the range specified above, the owner or operator shall investigate the DIFF and make corrections to it. This requirement shall not apply on the days the Tunnel Kiln (EU-15) is not in operation.

K. The owner or operator shall operate and maintain the Tunnel Kiln (EU 15) and the DIFF (CE 15) according to the manufacturer's specifications with inspections occurring at a minimum of once per year. The owner or operator shall maintain a log of all maintenance and inspection activities performed on the Tunnel Kiln (EU 15) and the DIFF (CE 15). This log shall include, but is not necessarily limited to:
   1. The date and time any inspection and/or maintenance was performed on the Tunnel Kiln (EU-15) and/or the DIFF (CE-15);
   2. Any issues identified during the inspection and the date each issue was resolved;
   3. Any issues addressed during the maintenance activities and the date each issue was resolved;
   4. Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 23-A-068

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 72
Stack Opening, (inches, dia.): 46
Exhaust Flow Rate (scfm): 20,550
Exhaust Temperature (°F): 502

Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 23-A-068

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

**Monitoring Requirements**

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

**Stack Testing:**

| Pollutant | First Stack Test | Second Stack Test | Test Method |
|---|---|---|---|
| Particulate Matter 2.5 (PM2.5) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |
| Particulate Matter 10 (PM10) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |
| Particulate Matter - State | Initial | Every 5 years | 40 CFR 60, Appendix A, Method 5<br>40 CFR 51 Appendix M Method 202 |
| Sulfur Dioxide (SO2) | Initial | Every 5 years | 40 CFR 60, Appendix A, Method 6C |
| Carbon Monoxide (CO) | Initial | Every 5 years | 40 CFR 60, Appendix A, Method 10 |
| Hydrogen Chloride (HCl) | Initial | Every 5 years | 40 CFR 63, Appendix A, Method 320<br>OR<br>40 CFR 60, Appendix A, Method 26A |
| Hydrogen Fluoride (HF) | Initial | Every 5 years | 40 CFR 63, Appendix A, Method 320<br>OR<br>40 CFR 60, Appendix A, Method 26A |

Authority for Requirement – DNR Construction Permi: 23-A-068

*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 21.10(7)*

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

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

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

Authority for Requirement: 567 IAC 24.108(3)

# EU-15 Tunnel Kiln 2 Agency O&M Plan

## I. BACKGROUND

### A. Emissions Unit

| | |
|---|---|
| Description: | Ceric Tunnel Kiln controlled by a Dry Injection Fabric Filter (DIFF) |
| Identification: | EU-15, CE-15 |
| Facility: | Glen-Gery Corporation, Adel Facility, Adel, Iowa |

### B. Applicable Regulations, Emission Limit, and Monitoring Requirements

| | |
|---|---|
| Regulation No.: | Iowa DNR Construction Permit 00-A-654-S3 |
| Emission Limits: | 0.83 lb HF/hour and 3.56 tons HF/year<br>0.81 lb HCl/hour and 3.50 tons HCl/year |
| Monitoring Requirements: | DIFF pressure drop<br>DIFF lime feed rate setting<br>Lime feed hopper level |

### C. Control Technology

Dry Injection Fabric Filter (DIFF)

## II. MONITORING APPROACH

The key elements of the monitoring approach are presented below:

### A. Indicator

DIFF pressure drop
DIFF lime feed rate setting
Lime feed hopper level

### B. Measurement Approach

The permittee shall maintain the following monitoring devices:

- Device designed to monitor the pressure drop across DIFF;
- Device to monitor the lime feed rate setting for the DIFF; and
- Device to monitor lime level in feed hopper.

### C. Indicator Range

- DIFF pressure drop shall be within normal parameters for the brick product being produced, between 2.0 and 8.0 inches of water column.
- Lime feed rate [with the setting in hertz (Hz)] shall be at the required level while kiln is operating.
- Lime level in the feed hopper shall be above the minimum level required for normal operations.

### D. Performance Criteria

Data Representativeness:

- An analog pressure differential

measurement device (Magnehelic or equivalent) shall measure the pressure differential across the DIFF via measurement ports installed at the inlet and outlet of the DIFF.
- The lime feed rate for the DIFF shall be established during performance testing and is controlled by a weigh system.
- A level indicator device (ultrasonic or equivalent) shall continuously monitor the relative level of lime in the DIFF feed hopper.

Verification of Operational Status: Verification of operational status of the monitoring systems and gauges shall be ensured through the installation, calibration, maintenance, and operation of each system in accordance with the manufacturer's recommended practice. Copies of the manufacturer's recommended practices shall be retained on file at the Facility. Operators shall confirm the status of the monitoring systems daily.

QA/QC Practices and Criteria:

- The monitoring equipment identified in this plan shall be installed, operated, calibrated and maintained in accordance with the manufacturer's recommended practice. Copies of the manufacturer's recommended practices shall be retained on file at the Facility.
- Operators shall confirm the status of the monitoring systems daily.

| | |
|---|---|
| Monitoring Frequency and Data: | • The DIFF pressure drop shall be monitored continuously and checked and recorded daily (when in operation).<br>• The lime feed rate shall be checked and recorded daily (when in operation).<br>• The lime feed hopper level shall be continuously monitored and checked and recorded daily (when in operation). |
| Collection Procedure: | The results of each inspection, calibration and validation check shall be recorded. These records shall be maintained for five years from the date of each occurrence. |

## III. JUSTIFICATION

### A. Background

The Tunnel Kiln 2 requires a Dry Injection Fabric Filter (DIFF) for HF and HCl emissions control.

### B. Rationale for Selection of Performance Indicator

Exhaust gas from Tunnel Kiln 2 travels through the DIFF, with the lime reacting with the HF and HCl in the exhaust, providing HF and HCl emissions control to the kiln. Effective HF and HCl removal depends upon:

- Airflow through the DIFF; and
- Adequate lime throughput through the DIFF.

### C. Rationale for Selection of Indicator Level

- An out-of-range pressure differential across the DIFF may indicate potential DIFF malfunctions. High pressure differential may indicate air flow blockage.
- If the flow of lime is too slow or the lime supply falls below recommended levels, HF and HCl control efficiency may be impacted.
- The minimum lime feed rate is established during source testing. Should compliance testing be conducted at a higher rate, those rates shall become the minimum throughput limits.

## Emission Point ID Number: EP-16

Associated Equipment

Associated Emission Unit ID Number: EU-16

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Emission Unit vented through this Emission Point: EU-16
Emission Unit Description: Tunnel Dryer
Raw Material/Fuel: Clay/Shale, Natural gas
Rated Capacity: Clay/Shale: 16.37 tons/hr, Natural Gas:10 MMBtu/hr (total both burners)

## Applicable Requirements

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 05-A-891-S2
567 IAC 23.3(2)"d"

[(1)] If visible emissions are observed the owner or operator is required 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 2.5 (PM2.5)
Emission Limit(s): 1.03 lb/hr
Authority for Requirement: DNR Construction Permit 05-A-891-S2

Pollutant: Particulate Matter 10 (PM10)
Emission Limit(s): 1.25 lb/hr
Authority for Requirement: DNR Construction Permit 05-A-891-S2

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 3.10 lb/hr, 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 05-A-891-S2
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide ($SO_2$)
Emission Limit(s): 500 ppmv
Authority for Requirement: DNR Construction Permit 05-A-891-S2
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides ($NO_X$)
Emission Limit(s): 1.60 lb/hr
Authority for Requirement: DNR Construction Permit 05-A-891-S2

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 4.50 lb/hr
Authority for Requirement: DNR Construction Permit 05-A-891-S2

Pollutant: Hydrogen Chloride (HCl)
Emission Limit(s): 0.03 lb/hr
Authority for Requirement: DNR Construction Permit 05-A-891-S2

Pollutant: Hydrogen Fluoride (HF)
Emission Limit(s): 0.07 lb/hr
Authority for Requirement: DNR Construction Permit 05-A-891-S2

**Operating Requirements with Associated Monitoring and Recordkeeping**

All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

A. The dryer burners are limited to combusting only natural gas or propane.
B. The average hourly production rate of the Dryer (EU-16) shall not exceed 14.5 tons per hour (tons/hr) calculated on a daily basis.
    1. The facility shall calculate and record the average hourly production rate (tons/hr) of the Dryer (EU-16):
        (a) The facility shall record the amount of product produced by the Dryer (EU-16), in pounds, on a daily basis;
        (b) The facility shall record the hours of operation for the Dryer (EU-16), on a daily basis;
        (c) The facility shall calculate and record on a daily basis the average hourly production rate (tons/hr) of the Dryer (EU-16) based on the daily amount of product produced and daily hours of operation.
C. The owner or operator shall operate and maintain the emission unit (EU-16) according to the manufacturer's specifications with inspections occurring at a minimum of once per year. The owner or operator shall maintain a log of all maintenance and inspection activities performed on the emission unit (EU-16). This log shall include, but is not necessarily limited to:
    1. The date and time any inspection and/or maintenance was performed on the Dryer (EP-16);
    2. Any issues identified during the inspection and the date each issue was resolved;
    3. Any issues addressed during the maintenance activities and the date each issue was resolved;
    4. Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 05-A-891-S2

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

Stack Height, (ft, from the ground): 55
Stack Opening, (inches, dia.): 75
Exhaust Flow Rate (scfm): 58,870
Exhaust Temperature (°F): 118
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 05-A-891-S2

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

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

**Stack Testing:**

| Pollutant | First Stack Test | Second Stack Test | Test Method |
|---|---|---|---|
| Particulate Matter 2.5 (PM2.5) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |
| Particulate Matter 10 (PM10) | Initial | Every 5 years | 40 CFR 51, Appendix A, Method 5 or 201A with 202 |

Authority for Requirement: DNR Construction Permit 05-A-891-S2

*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 21.10(7)*

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

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

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

Authority for Requirement: 567 IAC 24.108(3)

## Emission Point ID Number: EP-20

Associated Equipment

Associated Emission Unit ID Number: EU-20
Emissions Control Equipment ID Number: CE-20
Emissions Control Equipment Description: Fabric Filter

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Emission Unit vented through this Emission Point: EU-20
Emission Unit Description: Sand Dryer
Raw Material/Fuel: Sand
Rated Capacity: 10 tons/hr

## Applicable Requirements

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 10-A-553
567 IAC 23.3(2)"d"

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

Pollutant: Particulate Matter 10 (PM10)
Emission Limit(s): 0.55 lb/hr
Authority for Requirement: DNR Construction Permit 10-A-553

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 0.55 lb/hr, 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 10-A-553
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide ($SO_2$)
Emission Limit(s): 500 ppmv
Authority for Requirement: DNR Construction Permit 10-A-553
567 IAC 23.3(3)"e"

**Operating Requirements with Associated Monitoring and Recordkeeping**

All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

Operating limits for this emission unit shall be:

1. The fabric filter shall be operated and maintained per the manufacturer's instructions and specifications.
2. The owner/operator shall maintain a record of all maintenance and repair to the control equipment.

Authority for Requirement: DNR Construction Permit 10-A-553

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 38
Stack Opening, (inches.): 36 x 36
Exhaust Flow Rate (scfm): 644
Exhaust Temperature (°F): 100
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 10-A-553

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 24.108(3)

## Emission Point ID Numbers: EP-21 and EP-22

Associated Equipment

| Emission Point | Emission Unit | Emission Unit Description | Raw Material/ Fuel | Rated Capacity (Storage) | Control Equipment |
|---|---|---|---|---|---|
| EP-21 | EU-21 | Hydrated Lime Silo | Lime | 57 tons | CE-21 Baghouse |
| EP-22 | EU-22 | Hydrated Lime Silo | Lime | 85 tons | CE-22 Baghouse |

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# Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permits 14-A-570, 14-A-571
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of "No Visible Emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permits 14-A-570, 14-A-571
567 IAC 23.3(2)"a"

**Operating Requirements with Associated Monitoring and Recordkeeping**

All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

1. The amount of hydrated limestone loaded into each of these units (EU-21 & EU-22) shall not exceed 2,190 tons per rolling 12-month period.
2. The owner or operator shall inspect, maintain, and operate the baghouses (CE-21 & CE-22) according to manufacturer instructions and specifications.
3. Record monthly the amount of hydrated limestone in tons loaded into each of the units (EU-21 & EU-22) each month. Calculate and record monthly and rolling 12-month totals.
4. The owner or operator shall maintain a record of all inspections and maintenance for each of the baghouses (CE-21 and CE-22).

Authority for Requirement: DNR Construction Permits 14-A-570, 14-A-571

**Emission Point Characteristics**

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

| Emission Point | EP-21 | EP-22 |
|---|---|---|
| Stack Height (ft, from ground) | 54 | 72 |
| Stack Opening (inches, dia.) | 6 | 6 |
| Exhaust Flow Rate (scfm) | 636 | 636 |
| Exhaust Temperature (°F) | Ambient | 302 |
| Discharge Style | Horizontal | Horizontal |
| Authority for Requirement (DNR Construction Permit) | 14-A-570 | 14-A-571 |

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 24.108(3)

## Emission Point ID Numbers: EP-23 & EP-24

Associated Equipment

| Emission Point | Emission Unit | Emission Unit Description | Raw Material/ Fuel | Rated Capacity (Storage) | Control Equipment |
|---|---|---|---|---|---|
| EP-23 | EU-23a | Silica Sand Silos | Sand | 128 tons (each) | CE-23 Bin Vent Filter |
| | EU-23b | | | | |
| EP-24 | EU-24 | Silica Sand Silo | Sand | 128 tons | CE-24 Bin Vent Filter |

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# Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permits 14-A-572, 14-A-573
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of "No Visible Emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM) - State
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permits 14-A-572, 14-A-573
567 IAC 23.3(2)"a"

**Operating Requirements with Associated Monitoring and Recordkeeping**

All records as required by this permit shall be available on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

1. The amount of silica sand loaded into units (EU-23a and EU-23b) and unit EU-24 shall each not exceed 4,992 tons per rolling 12-month period.
2. The owner or operator shall inspect, maintain, and operate the baghouses (CE-23 & CE-24) according to manufacturer instructions and specifications.
3. Record monthly the amount of silica sand in tons loaded into the units (EU-23a and EU-23b) and unit EU-24 shall each month. Calculate and record monthly and rolling 12-month totals.
4. The owner or operator shall maintain a record of all inspections and maintenance for the baghouses (CE-23 & CE-24).

Authority for Requirement: DNR Construction Permits 14-A-572, 14-A-573

**Emission Point Characteristics**

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

| Emission Point | EP-23 | EP-24 |
|---|---|---|
| Stack Height (ft, from ground) | 30 | 30 |
| Stack Opening (inches) | 23 x 7 | 23 x 7 |
| Exhaust Flow Rate (scfm) | 640 | 640 |
| Exhaust Temperature (°F) | Ambient | Ambient |
| Discharge Style | Downward | Downward |
| Authority for Requirement (DNR Construction Permit) | 14-A-572 | 14-A-573 |

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 24.108(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 (IAC). When 567 IAC as amended May 15, 2024, and cited in this permit becomes State Implementation Plan (SIP) approved, it will supersede 567 IAC as amended February 8, 2023. Prior to May 15, 2024, all Title V rule citations in this Title V permit were found and cited in 567 IAC Chapter 22. During the period from May 15, 2024, to the date that 567 IAC as amended May 15, 2024, is approved into the SIP, both 567 IAC as amended May 15, 2024, and 567 IAC as amended February 8, 2023 form the legal basis for the applicable requirements included in this permit. A crosswalk showing the citation changes is attached to this permit in Appendix B.

**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 24.108(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 24.105(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 24.108(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 24.108(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 24.108(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 24.108(15)"c"*

**G2. Permit Expiration**

1. Except as provided in rule 567—24.104(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—24.105(455B). *567 IAC 24.116(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. 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 24.105(2). *567 IAC 24.105*

**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 24.107(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 24.108(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 24.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 24.108 (5)*

**G6. Annual Fee**
1. The permittee is required under subrule 567 IAC 24.106 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 24.115(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 24.108 (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 24.108 (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 21.8(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 24.108(4), 567 IAC 24.108(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 24;

b. Compliance test methods specified in 567 Chapter 21; or

c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

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

a. Any monitoring or testing methods provided in these rules; or

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

**G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification**
If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 24.108(6)*
**G13. Hazardous Release**
The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 725-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*
**G14. Excess Emissions and Excess Emissions Reporting Requirements**
1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. A variance from this subrule may be available as

provided for in Iowa Code section 455B.143. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Initial Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 21.10(6). An initial report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 21.10(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 21.7(1)-567 IAC 21.7(4)*

**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 24.108(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 24.

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—24.140(455B) through 567 - 24.144(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 24.110(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 24.110(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 24.110(1). *567 IAC 24.110(3)*

4. The permit shield provided in subrule 24.108(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 24.110(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 24.108(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 - 24.113(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 24.107(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 24.107(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 24.112(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 24, 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 24.111-567 IAC 24.113*

**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 <u>except</u> 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only*

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

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedances of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 24.108(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 24.108(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 24.108(17)"a", 567 IAC 24.108(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 24.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. *567 IAC 24.114(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 24.114(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 24.108 (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 24.108 (8)*

**G27. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 24.108 (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 24.111(1). *567 IAC 24.111 (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 24.3(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 (42 days) 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
6200 Park Ave
Suite 200
Des Moines, IA 50321
(515) 343-6589

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 21.10(7)"a", 567 IAC 21.10(9)*

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

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

**G32. Contacts List**

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

Iowa Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA Region 7
11201 Renner Blvd.
Lenexa, KS 66219
(913) 551-7020

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

Chief, Air Quality Bureau
Iowa Department of Natural Resources
6200 Park Ave
Suite 200
Des Moines, IA 50321
(515) 313-8325

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

**Field Office 1**
1101 Commercial Court, Suite 10
Manchester, IA 52057
(563) 927-2640

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

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

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

**Field Office 5**
6200 Park Ave
Suite 200
Des Moines, IA 50321
(515) 725-0268

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

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

**Linn County Public Health**
Air Quality Branch
1020 6th Street SE
Cedar Rapids, IA 52401
(319) 892-6000

# V. Appendix A: NSPS and NESHAP Web Links

A. 40 CFR 60 Subpart A – General Provisions
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-A

B. 40 CFR 60 Subpart OOO – Standards of Performance for *Nonmetallic Mineral Processing Plants.*
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-OOO

# Appendix B: Executive Order 10 (EO10) Rules Crosswalk

# EP-9 and EP-10

**Compliance Plan**
*The owner/operator of this equipment shall comply with following compliance plan that was submitted by the facility.*

EP-9 and EP-10 are idle. Once restarted, the facility will:

- Provide the IADNR a 15-day notice upon the startup date of EU-9 & EU-10.
- Complete emissions testing on EU-9 & EU-10 within 60 days after the startup date.
- Provide the IADNR a test protocol no later than 15-days before conducting emissions testing.

**Description**

Units may be shut down. Upon startup, they will need to follow the compliance plan

Emission Point EP-9 (Tunnel Kiln #1): Upon startup, testing of Opacity, PM2.5, PM10, SO2, NOx, CO, HCL, and HF as required by DNR Construction Permit 00-A-654-S3.

Emission Unit EP-10 (Dryer) is being retested for PM2.5 and PM10 as required by DNR Construction Permit 00-A-655-S2

**Condition**

The permittee entered a temporary shutdown period with the Tunnel Kiln #1 and Dryer.
Upon startup, the facility will follow the compliance plan for notification and testing.

Authority for Requirement: 567 IAC 24.108(15)

| Previous Chapter Number (Prior to 5/15/2024) | Current Chapter Number | Previous Title and Description (Prior to 5/15/2024) | Current Title and Description | Actions Taken |
|---|---|---|---|---|
| **20** | **20 (Reserved)** | Scope of Title - Definitions | N/A | **Definitions moved** to Ch. 21, 22 and 23.<br><br>**Rescinded** Ch. 20. (Reserved) |
| **21** | **21** | Compliance | Compliance, Excess Emissions, and Measurement of Emissions | **Kept and combined** with rules from Chapters 24, 25, 26, and 29. |
| **22** | **22** | Controlling Pollution-Permits | Controlling Air Pollution - Construction Permitting | **Kept construction permit rules and combined** with Ch. 20 (definitions) and Ch. 28 (NAAQS).<br><br>**Moved operating permit rules** to Chapter 24. |
| **22.100 - 22.300(12)** | **(New) 24** | N/A | Operating Permits | **Moved operating permit rules** from Ch. 22 to Ch. 24. |
| **23** | **23** | Emission Standards | Air Emission Standards | **Kept** |
| **24** | **(New) 21** | Excess Emissions | Compliance, Excess Emissions, and Measurement of Emissions | **Moved rules and combined** with Ch. 21.<br><br>**Moved TV rules** here (to Ch. 24)**.** |
| **25** | **(New) 21** | Emissions Measurement | Compliance, Excess Emissions, and Measurement of Emissions | **Moved rules and combined** with Ch. 21.<br><br>**Rescinded** Ch. 25. (Reserved) |
| **26** | **(New) 21** | Emergency Air Pollution Episodes | Compliance, Excess Emissions, and Measurement of Emissions | **Moved rules and combined** with Ch. 21.<br><br>**Rescinded** Ch. 26. (Reserved) |
| **27** | **27** | Local Program Acceptance | Local Program Acceptance | **Kept** |
| **28** | **22** | NAAQS | N/A | **Moved rules and combined** with Ch. 22.<br><br>**Rescinded** Ch. 28. (Reserved) |
| **29** | **(New) 21** | Opacity Qualifications | Compliance, Excess Emissions, and Measurement of Emissions | **Moved rules and combined** with Ch. 21.<br><br>**Rescinded** Ch. 29. (Reserved) |
| **30** | **30** | Fees | Fee | **Kept** |
| **31** | **31** | Nonattainment Areas | Nonattainment New Source Review | **Kept** |
| **32** | **N/A** | AFO Field Study | N/A | **Rescinded** Ch. 32. (Reserved) |
| **33** | **33** | Special regulations and construction permit requirements for major stationary sources—Prevention of significant deterioration (PSD) of air quality | Construction permit requirements for major stationary sources—Prevention of significant deterioration (PSD) | **Kept** |
| **34** | **N/A** | Emissions Trading-CAIR-CAMR | N/A | **Rescinded** Ch. 34. (Reserved) |
| **35** | **N/A** | Grant Assistance Programs | N/A | **Rescinded** Ch. 35. (Reserved) |

| Previous Chapter Number (Prior to 5/15/2024) | Current Chapter Number | Previous Title and Description (Prior to 5/15/2024) | Current Title and Description | Actions Taken |
|---|---|---|---|---|
| **20** | **20 (Reserved)** | **Scope of Title - Definitions** | **N/A** | **Definitions moved** to Ch. 21, 22 and 23.<br><br>**Rescinded** Ch. 20. (Reserved) |
| 20.1 | N/A | Scope of title | N/A | |
| 20.2 | Ch. 21, 22, 23 | Definitions | Definitions | See beginning of Ch. 21, 22, and 23 |
| 20.3 | N/A | Air quality forms generally | N/A | |
| **21** | **21** | **Compliance** | **Compliance, Excess Emissions, and Measurement of Emissions** | **Kept and combined** with rules from Chapters 24, 25, 26, and 29. |
| 21.1 | 21.1 | Compliance Schedule | Definitions and compliance requirements | Added definitions from Ch. 21, some language updated |
| 21.2 | 21.2 | Variances | Variances | Some language updated |
| 21.3 | 21.3 | Emission reduction program | Reserved | Reserved |
| 21.4 | 21.4 | Circumvention of rules | Circumvention of rules | Minor language updated |
| 21.5 | 21.5 | Evidence used in establishing that a violation has or is occurring | Evidence used in establishing that a violation has occurred or is occurring | 21.5(2) Reserved, some language updated |
| 21.6 | 21.6 | Temporary electricity generation for disaster situations | Temporary electricity generation for disaster situations | Minor language updated |
| 24.1 | 21.7 | Excess emission reporting | Excess emission reporting | Moved from Ch. 24, some language updated |
| 24.2 | 21.8 | Maintenance and repair requirements | Maintenance and repair requirements | Moved from Ch. 24, some language updated |
| N/A | 21.9 | N/A | Compliance with other requirements | New language |
| 25.1 | 21.10 | Testing and sampling of new and existing equipment | Testing and sampling of new and existing equipment | Moved from Ch. 25, some language updated |
| 25.2 | 21.11 | Continuous emission monitoring under the acid rain program | Continuous emission monitoring under the acid rain program | Moved from Ch. 25, some language updated |
| 25.3 | N/A | Mercury emissions testing and monitoring | N/A | Rescinded. Except 25.3(5) |
| 25.3(5) | 21.12 | Affected sources subject to Section 112(g) | Affected sources subject to Section 112(g) | Moved from Ch. 25, some language updated |
| 29.1 | 21.13 | Methodology and qualified observer | Methodology and qualified observer | Moved from Ch. 29, some language updated |
| 26.1 | 21.14 | Prevention of air pollution emergency episodes - General | Prevention of air pollution emergency episodes | Moved from Ch. 26, some language updated |
| 26.2 | 21.15 | Episode criteria | Episode criteria | Moved from Ch. 26, some language updated |
| 26.3 | 21.16 | Preplanned abatement strategies | Preplanned abatement strategies | Moved from Ch. 26, some language updated |
| 26.4 | 21.17 | Actions taken during episodes | Actions taken during episodes | Moved from Ch. 26, some language updated |
| Ch 26 Table III | Table I | Abatement strategies emission reduction actions alert level | Abatement strategies emission reduction actions alert level | Moved from Ch. 26, reference federal appendix table |
| Ch 26 Table IV | Table II | Abatement strategies emission reduction actions warning level | Abatement strategies emission reduction actions warning level | Moved from Ch. 26, reference federal appendix table |
| Ch 26 Table V | Table III | Abatement strategies emission reduction actions emergency level | Abatement strategies emission reduction actions emergency level | Moved from Ch. 26, reference federal appendix table |
| **22** | **22** | **Controlling Pollution-Permits** | **Controlling Air Pollution - Construction Permitting** | **Kept construction permit rules and combined** with Ch. 20 (definitions) and Ch. 28 (NAAQS).<br><br>**Moved operating permit rules** to Chapter 24. |
| 22.1 | 22.1 | Permits required for new or existing stationary sources | Definitions and permit requirements for new or existing stationary sources | Added definitions from Ch. 20, some language updated |
| 22.2 | 22.2 | Processing permit applications | Processing permit applications | |
| 22.3 | 22.3 | Issuing permits | Issuing permits | |
| 22.4 | 22.4 | Special requirements for major stationary sources located in areas designated attainment or unclassified (PSD) | Major stationary sources located in areas designated attainment or unclassified (PSD) | |
| 22.5 | 22.5 | Special requirements for nonattainment areas | Major stationary sources located in areas designated Nonattainment | |
| 22.6 | 22.6 | Nonattainment area designations | Reserved | |

| Previous Chapter Number (Prior to 5/15/2024) | Current Chapter Number | Previous Title and Description (Prior to 5/15/2024) | Current Title and Description | Actions Taken |
|---|---|---|---|---|
| 22.7 | 22.7 | Alternative emission control program | Alternative emission control program | |
| 22.8 | 22.8 | Permit by rule | Permit by rule | |
| 22.9 | 22.9 | Special requirements for visibility protection | Special requirements for visibility protection | A lot of language updated or removed |
| 22.10 | 22.10 | Permitting requirements for country grain elevators, country grain terminal elevators, grain terminal elevators and feed mill equipment | Permitting requirements for country grain elevators, country grain terminal elevators, grain terminal elevators and feed mill equipment | |
| 28.1 | 22.11 | Ambient air quality standards - Statewide standards | Ambient air quality standards | Moved from Ch. 28, minor language updated |
| 22.12 to 22.99 | N/A | Reserved | N/A | Removed |

| **22.100 - 22.300(12)** | **(New) 24** | **N/A** | **Operating Permits** | **Moved operating permit rules** from Ch. 22 to Ch. 24. |
|---|---|---|---|---|
| 22.100 | 24.100 | Definitions for Title V operating permits | Definitions for Title V operating permits | Moved from Ch. 22, some language updated, many 40 CFR 70 definitions adopted by reference |
| 22.101 | 24.101 | Applicability of Title V operating permit requirements | Applicability of Title V operating permit requirements | Moved from Ch. 22, some language updated to correct punctuation and remove old dates |
| 22.102 | 24.102 | Source category exemptions | Source category exemptions | Moved from Ch. 22, some language updated to correct punctuation |
| 22.103 | 24.103 | Insignificant activities | Insignificant activities | Moved from Ch. 22, some language updated to correct typos and remove old dates |
| 22.104 | 24.104 | Requirement to have a Title V permit | Requirement to have a Title V permit | Moved from Ch. 22, some language updated no changes to rule text |
| 22.105 | 24.105 | Title V permit applications | Title V permit applications | Moved from Ch. 22, updated language to address electronic submissions and remove past application due dates |
| 22.106 | 24.106 | Annual Title V emissions inventory | Annual Title V emissions inventory | Moved from Ch. 22, no changes to rule text |
| 22.107 | 24.107 | Title V permit processing procedures | Title V permit processing procedures | Moved from Ch. 22, some language updated to update locations of public records and remove old CFR amendment dates |
| 22.108 | 24.108 | Permit content | Permit content | Moved from Ch. 22, some language updated to correct punctuation, remove old dates, and adopt 40 CFR 70 rules by reference |
| 22.109 | 24.109 | General permits | General permits | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.110 | 24.110 | Changes allowed without a Title V permit revision (off-permit revisions) | Changes allowed without a Title V permit revision (off-permit revisions) | Moved from Ch. 22, some language updated to remove redundant language |
| 22.111 | 24.111 | Administrative amendments to Title V permits | Administrative amendments to Title V permits | Moved from Ch. 22, no changes to rule text |
| 22.112 | 24.112 | Minor Title V permit modifications | Minor Title V permit modifications | Moved from Ch. 22, no changes to rule text |
| 22.113 | 24.113 | Significant Title V permit modifications | Significant Title V permit modifications | Moved from Ch. 22, no changes to rule text |
| 22.114 | 24.114 | Title V permit reopenings | Title V permit re-openings | Moved from Ch. 22 to Ch. 24, some language updated to adopt 40 CFR 70 rules by reference |
| 22.115 | 24.115 | Suspension, termination, and revocation of Title V permits | Suspension, termination, and revocation of Title V permits | Moved from Ch. 22, no changes to rule text |
| 22.116 | 24.116 | Title V permit renewals | Title V permit renewals | Moved from Ch. 22, no changes to rule text |
| 22.117-22.119 | 24.117-24.119 | Reserved | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.120 | 24.120 | Acid rain program—definitions | Acid rain program—definitions | Moved from Ch. 22, some language updated to remove old CFR amendment dates and address electronic submissions |
| 22.121 | 24.121 | Measurements, abbreviations, and acronyms | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.122 | 24.122 | Applicability | Applicability | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.123 | 24.123 | Acid rain exemptions | Acid rain exemptions | Moved from Ch. 22, some language updated to correct punctuation |
| 22.124 | 24.124 | Retired units exemption | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.125 | 24.125 | Standard requirements | Standard requirements | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.126 | 24.126 | Designated representative—submissions | Designated representative—submissions | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.127 | 24.127 | Designated representative—objections | Designated representative—objections | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.128 | 24.128 | Acid rain applications—requirement to apply | Acid rain applications—requirement to apply | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |

| | | | | |
|---|---|---|---|---|
| 22.129 | 24.129 | Information requirements for acid rain permit applications | Information requirements for acid rain permit applications | Moved from Ch. 22, no changes to rule text |

| Previous Chapter Number (Prior to 5/15/2024) | Current Chapter Number | Previous Title and Description (Prior to 5/15/2024) | Current Title and Description | Actions Taken |
|---|---|---|---|---|
| 22.130 | 24.130 | Acid rain permit application shield and binding effect of permit application | Acid rain permit application shield and binding effect of permit application | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.131 | 24.131 | Acid rain compliance plan and compliance options—general | Acid rain compliance plan and compliance options—general | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.132 | 24.132 | Repowering extensions | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.133 | 24.133 | Acid rain permit contents—general | Acid rain permit contents—general | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.134 | 24.134 | Acid rain permit shield | Acid rain permit shield | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.135 | 24.135 | Acid rain permit issuance procedures—general | Acid rain permit issuance procedures—general | Moved from Ch. 22, no changes to rule text |
| 22.136 | 24.136 | Acid rain permit issuance procedures—completeness | Acid rain permit issuance procedures—completeness | Moved from Ch. 22, no changes to rule text |
| 22.137 | 24.137 | Acid rain permit issuance procedures—statement of basis | Acid rain permit issuance procedures—statement of basis | Moved from Ch. 22, no changes to rule text |
| 22.138 | 24.138 | Issuance of acid rain permits | Issuance of acid rain permits | Moved from Ch. 22, some language updated to remove old dates and deadlines |
| 22.139 | 24.139 | Acid rain permit appeal procedures | Acid rain permit appeal procedures | Moved from Ch. 22, no changes to rule text |
| 22.140 | 24.140 | Permit revisions—general | Permit revisions—general | Moved from Ch. 22, some language updated to remove old dates |
| 22.141 | 24.141 | Permit modifications | Permit modifications | Moved from Ch. 22, no changes to rule text |
| 22.142 | 24.142 | Fast-track modifications | Fast-track modifications | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.143 | 24.143 | Administrative permit amendment | Administrative permit amendment | Moved from Ch. 22, some language updated to remove fax option |
| 22.144 | 24.144 | Automatic permit amendment | Automatic permit amendment | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.145 | 24.145 | Permit reopenings | Permit re-openings | Moved from Ch. 22, language updated to adopt 40 CFR 70 rules by reference |
| 22.146 | 24.146 | Compliance certification—annual report | Compliance certification—annual report | Moved from Ch. 22, no changes to rule text |
| 22.147 | 24.147 | Compliance certification—units with repowering extension plans | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.148 | 24.148 | Sulfur dioxide opt-ins | Sulfur dioxide opt-ins | Moved from Ch. 22, some language updated to update the 40 CFR Part 74 amendment date |
| 22.149 - 22.199 | 24.149 - 24.299 | Reserved | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.200 | 24.200 - 24.299 | Definitions for voluntary operating permits | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.201 | 24.200 - 24.299 | Eligibility for voluntary operating permits | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.203 | 24.200 - 24.299 | Voluntary operating permit applications | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.204 | 24.200 - 24.299 | Voluntary operating permit fees | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.205 | 24.200 - 24.299 | Voluntary operating permit processing procedures | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.206 | 24.200 - 24.299 | Permit content | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.207 | 24.200 - 24.299 | Relation to construction permits | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.208 | 24.200 - 24.299 | Suspension, termination, and revocation of voluntary operating permits | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.209 | 24.200 - 24.299 | Change of ownership for facilities with voluntary operating permits | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.210 - 22.299 | 24.200 - 24.299 | Reserved | Reserved | Moved from Ch. 22, no changes to rule text |
| 22.300 | 24.300 | Operating permit by rule for small sources | Operating permit by rule for small sources | Moved from Ch. 22, no changes to rule text |

| 23 | 23 | Emission Standards | Air Emission Standards | Kept |
|---|---|---|---|---|
| 23.1 | 23.1 | Emission standards | Emission standards | Kept, language updated, tables used |
| 23.2 | 23.2 | Open burning | Open burning | Kept, some language updated |
| 23.3 | 23.3 | Specific contaminants | Specific contaminants | Kept, some language updated |
| 23.4 | 23.4 | Specific processes | Specific processes | Kept, some language updated |
| 23.5 | 23.5 | Anaerobic lagoons | Anaerobic lagoons | Kept, some language updated |
| 23.6 | 23.6 | Alternative emission limits (the “bubble concept”) | Reserved | Removed |

| Previous Chapter Number (Prior to 5/15/2024) | Current Chapter Number | Previous Title and Description (Prior to 5/15/2024) | Current Title and Description | Actions Taken |
|---|---|---|---|---|
| **24** | **(New) 21** | **Excess Emissions** | **Compliance, Excess Emissions, and Measurement of Emissions** | **Moved rules and combined** with Ch. 21.<br><br>**Moved operating permit rules** here (to Ch. 24)**.** |
| 24.1 | 21.7 | Excess emission reporting | Excess emission reporting | Moved from Ch. 24, some language updated |
| 24.2 | 21.8 | Maintenance and repair requirements | Maintenance and repair requirements | Moved from Ch. 24, some language updated |
| **25** | **(New) 21** | **Emissions Measurement** | **Compliance, Excess Emissions, and Measurement of Emissions** | **Moved rules and combined** with Ch. 21.<br><br>**Rescinded** Ch. 25. (Reserved) |
| 25.1 | 21.10 | Testing and sampling of new and existing equipment | Testing and sampling of new and existing equipment | Moved from Ch. 25, some language updated |
| 25.2 | 21.11 | Continuous emission monitoring under the acid rain program | Continuous emission monitoring under the acid rain program | Moved from Ch. 25, some language updated |
| 25.3 | | Mercury emissions testing and monitoring | N/A | Rescinded. Except 25.3(5) |
| 25.3(5) | 21.12 | Affected sources subject to Section 112(g) | Affected sources subject to Section 112(g) | Moved from Ch. 25, some language updated |
| **26** | **(New) 21** | **Emergency Air Pollution Episodes** | **Compliance, Excess Emissions, and Measurement of Emissions** | **Moved rules and combined** with Ch. 21.<br><br>**Rescinded** Ch. 26. (Reserved) |
| 26.1 | 21.14 | Prevention of air pollution emergency episodes - General | Prevention of air pollution emergency episodes | Moved from Ch. 26, some language updated |
| 26.2 | 21.15 | Episode criteria | Episode criteria | Moved from Ch. 26, some language updated |
| 26.3 | 21.16 | Preplanned abatement strategies | Preplanned abatement strategies | Moved from Ch. 26, some language updated |
| 26.4 | 21.17 | Actions taken during episodes | Actions taken during episodes | Moved from Ch. 26, some language updated |
| Ch 26 Table III | Table I | Abatement strategies emission reduction actions alert level | Abatement strategies emission reduction actions alert level | Moved from Ch. 26, reference federal appendix table |
| Ch 26 Table IV | Table II | Abatement strategies emission reduction actions warning level | Abatement strategies emission reduction actions warning level | Moved from Ch. 26, reference federal appendix table |
| Ch 26Table V | Table III | Abatement strategies emission reduction actions emergency level | Abatement strategies emission reduction actions emergency level | Moved from Ch. 26, reference federal appendix table |
| **27** | **27** | **Local Program Acceptance** | **Local Program Acceptance** | **Kept** |
| 27.1 | 27.1 | General | General | Kept, some language updated |
| 27.2 | 27.2 | Certificate of acceptance | Certificate of acceptance | Kept, some language updated |
| 27.3 | 27.3 | Ordinance or regulations | Ordinance or regulations | Kept, some language updated |
| 27.4 | 27.4 | Administrative organization | Administrative organization | Kept, some language updated |
| 27.5 | 27.5 | Program activities | Program activities | Kept, some language updated |
| **28** | **22** | **NAAQS** | **N/A** | **Moved rules and combined** with Ch. 22.<br><br>**Rescinded** Ch. 28. (Reserved) |
| 28.1 | 22.11 | Ambient air quality standards - Statewide standards | Ambient air quality standards | **Moved from Ch. 28**, minor language updated<br><br>**Rescinded** Ch. 28. (Reserved) |
| **29** | **(New) 21** | **Opacity Qualifications** | **Compliance, Excess Emissions, and Measurement of Emissions** | **Moved rules and combined** with Ch. 21.<br><br>**Rescinded** Ch. 29. (Reserved) |
| 29.1 | 21.13 | Methodology and qualified observer | Methodology and qualified observer | Moved from Ch. 29, some language updated |

| Previous Chapter Number (Prior to 5/15/2024) | Current Chapter Number | Previous Title and Description (Prior to 5/15/2024) | Current Title and Description | Actions Taken |
|---|---|---|---|---|
| **30** | **30** | **Fees** | **Fee** | **Kept** |
| 30.1 | 30.1 | Purpose | Purpose | Kept, language updated |
| 30.2 | 30.2 | Fees associated with new source review applications | Fees associated with new source review applications | Kept, some language updated |
| 30.3 | 30.3 | Fees associated with asbestos demolition or renovation notification | Fees associated with asbestos demolition or renovation notification | Kept, some language updated |
| 30.4 | 30.4 | Fees associated with Title V operating permits | Fees associated with Title V operating permits | Kept, some language updated |
| 30.5 | 30.5 | Fee advisory groups | Fee advisory groups | Kept, language updated |
| 30.6 | 30.6 | Process to establish or adjust fees and notification of fee rates | Process to establish or adjust fees and notification of fee rates | Kept, some language updated |
| 30.7 | 30.7 | Fee revenue | Reserved | Language removed |
| **31** | **31** | **Nonattainment Areas** | **Nonattainment New Source Review** | **Kept** |
| 31.1 | 31.1 | Permit requirements relating to nonattainment areas | Permit requirements relating to nonattainment areas | Kept, some language updated |
| 31.2 | 31.2 | Conformity of general federal actions to the Iowa state implementation plan or federal implementation plan - Rescinded | Reserved | Language removed |
| 31.3 | 31.3 | Nonattainment new source review requirements for areas designated nonattainment on or after May 18, 1998 | Nonattainment new source review (NNSR) requirements for areas designated nonattainment | Kept, some language updated |
| 31.4 | 31.4 | Preconstruction review permit program | Preconstruction review permit program | Kept |
| 31.5 - 31.8 | 31.5 - 31.8 | Reserved | Reserved | Kept |
| 31.9 | 31.9 | Actuals PALs | Actuals PALs | Kept, some language updated |
| 31.10 | 31.10 | Validity of rules | Validity of rules | Kept |
| 31.11 - 31.19 | N/A | Reserved | N/A | Rescinded and removed |
| 31.20 | N/A | Special requirements for nonattainment areas designated before May 18, 1998 | N/A | Rescinded and removed |
| **32** | **N/A** | **AFO Field Study** | **N/A** | **Rescinded** Ch. 32. (Reserved) |
| 32.1 | N/A | Animal feeding operations field study | N/A | Rescinded, reserved, and language removed |
| 32.2 | N/A | Definitions | N/A | Rescinded, reserved, and language removed |
| 32.3 | N/A | Exceedance of the health effects value (HEV) for hydrogen sulfide | N/A | Rescinded, reserved, and language removed |
| 32.4 | N/A | Exceedance of the health effects standard (HES) for hydrogen sulfide | N/A | Rescinded, reserved, and language removed |
| 32.5 | N/A | Iowa Air Sampling Manual | N/A | Rescinded, reserved, and language removed |
| **33** | **33** | **Special regulations and construction permit requirements for major stationary sources—Prevention of significant deterioration (PSD) of air quality** | **Construction permit requirements for major stationary sources—Prevention of significant deterioration (PSD)** | **Kept** |
| 33.1 | 33.1 | Purpose | Purpose | Kept, some language updated |
| 33.2 | 33.2 | Reserved | Reserved | Kept |
| 33.3 | 33.3 | Special construction permit requirements for major stationary sources in areas designated attainment or unclassified (PSD) | PSD construction permit requirements for major stationary sources | Kept, some language updated |
| 33.4 - 33.8 | 33.4 - 33.8 | Reserved | Reserved | Kept |
| 33.9 | 33.9 | Plantwide applicability limitations (PALs) | Plantwide applicability limitations (PALs) | Kept, some language updated |
| 33.10 | 33.10 | Exceptions to adoption by reference | Exceptions to adoption by reference | Kept, some language updated |

| Previous Chapter Number (Prior to 5/15/2024) | Current Chapter Number | Previous Title and Description (Prior to 5/15/2024) | Current Title and Description | Actions Taken |
|---|---|---|---|---|
| **34** | **N/A** | **Emissions Trading-CAIR-CAMR** | **N/A** | **Rescinded** Ch. 34. (Reserved) |
| 34.1 | N/A | Purpose | N/A | Rescinded, reserved, and language removed |
| 34.2 - 34.199 | N/A | Reserved | N/A | Rescinded, reserved, and language removed |
| 34.200 | N/A | Provisions for air emissions trading and other requirements for the Clean Air Interstate Rule (CAIR) - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.201 | N/A | CAIR NOx annual trading program general provisions - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.202 | N/A | CAIR designated representative for CAIR NOx sources - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.203 | N/A | Permits - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.204 | N/A | Reserved | N/A | Rescinded, reserved, and language removed |
| 34.205 | N/A | CAIR NOx allowance allocations - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.206 | N/A | CAIR NOx allowance tracking system - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.207 | N/A | CAIR NOx allowance transfers - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.208 | N/A | Monitoring and reporting - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.209 | N/A | CAIR NOx opt-in units - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.210 | N/A | CAIR SO2 trading program - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.211 - 34.219 | N/A | Reserved | N/A | Rescinded, reserved, and language removed |
| 34.220 | N/A | CAIR NOx ozone season trading program - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.221 | N/A | CAIR NOx ozone season trading program general provisions - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.222 | N/A | CAIR designated representative for CAIR NOx ozone season sources - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.223 | N/A | CAIR NOx ozone season permits - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.224 | N/A | Reserved | N/A | Rescinded, reserved, and language removed |
| 34.225 | N/A | CAIR NOx ozone season allowance allocations - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.226 | N/A | CAIR NOx ozone season allowance tracking system - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.227 | N/A | CAIR NOx ozone season allowance transfers - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.228 | N/A | CAIR NOx ozone season monitoring and reporting - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.229 | N/A | CAIR NOx ozone season opt-in units - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.230 - 34.299 | N/A | Reserved | N/A | Rescinded, reserved, and language removed |
| 34.300 | N/A | Provisions for air emissions trading and other requirements for the Clean Air Mercury Rule (CAMR) - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.301 | N/A | Mercury (Hg) budget trading program general provisions - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.302 | N/A | Hg designated representative for Hg budget sources - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.303 | N/A | General Hg budget trading program permit requirements - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.304 | N/A | Hg allowance allocations - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.305 | N/A | Hg allowance tracking system - rescinded | N/A | Rescinded, reserved, and language removed |

| 34.306 | N/A | Hg allowance transfers - rescinded | N/A | Rescinded, reserved, and language removed |
|---|---|---|---|---|
| **Previous Chapter Number (Prior to 5/15/2024)** | **Current Chapter Number** | **Previous Title and Description (Prior to 5/15/2024)** | **Current Title and Description** | **Actions Taken** |
| 34.307 | N/A | Monitoring and reporting - rescinded | N/A | Rescinded, reserved, and language removed |
| 34.308 | N/A | Performance specifications - rescinded | N/A | Rescinded, reserved, and language removed |

| **35** | **N/A** | **Grant Assistance Programs** | **N/A** | **Rescinded** Ch. 35. (Reserved) |
|---|---|---|---|---|
| 35.1 | N/A | Purpose | N/A | Rescinded, reserved, and language removed |
| 35.2 | N/A | Definitions | N/A | Rescinded, reserved, and language removed |
| 35.3 | N/A | Role of the department of natural resources | N/A | Rescinded, reserved, and language removed |
| 35.4 | N/A | Eligible projects | N/A | Rescinded, reserved, and language removed |
| 35.5 | N/A | Forms | N/A | Rescinded, reserved, and language removed |
| 35.6 | N/A | Project selection | N/A | Rescinded, reserved, and language removed |
| 35.7 | N/A | Funding sources | N/A | Rescinded, reserved, and language removed |
| 35.8 | N/A | Type of financial assistance | N/A | Rescinded, reserved, and language removed |
| 35.9 | N/A | Term of loans | N/A | Rescinded, reserved, and language removed |
| 35.10 | N/A | Reduced award | N/A | Rescinded, reserved, and language removed |
| 35.11 | N/A | Fund disbursement limitations | N/A | Rescinded, reserved, and language removed |
| 35.12 | N/A | Applicant cost share | N/A | Rescinded, reserved, and language removed |
| 35.13 | N/A | Eligible costs | N/A | Rescinded, reserved, and language removed |
| 35.14 | N/A | Ineligible costs | N/A | Rescinded, reserved, and language removed |
| 35.15 | N/A | Written agreement | N/A | Rescinded, reserved, and language removed |
| 35.16 | N/A | Financial assistance denial | N/A | Rescinded, reserved, and language removed |