

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

Name of Permitted Facility: Climax Molybdenum Company
Facility Location: 2598 Highway 61, Fort Madison, IA 52627
Air Quality Operating Permit Number: 03-TV-001R2
Expiration Date: June 13, 2021
Permit Renewal Application Deadline: December 13, 2020

EIQ Number: 92-0970
Facility File Number: 56-02-021

Responsible Official

Name: Kurt Markkola
Title: General Manager
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Permit Contact Person for the Facility

Name: Kristine Thompson
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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Lori Hanson, Supervisor of Air Operating Permits Section

Date

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Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
CE	control equipment
CEM.....	continuous emission monitor
°F	degrees Fahrenheit
EIQ.....	emissions inventory questionnaire
EP	emission point
EU	emission unit
gal/hr.	gallons per hour
gr./dscf	grains per dry standard cubic foot
AC	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: Climax Molybdenum Company

Permit Number: 03-TV-001R2

Facility Description: Industrial Inorganic Chemical Production (SIC 2819)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP1	R13	Sulfuric Acid Tank/Car Load/Unload West	02-A-657-S1
EP2	R14	Sulfuric Acid Tank/Car Load/Unload North	02-A-658
EP4	R3	Rail Car Thawing	NA
EP6	T1	Sulfuric Acid Storage Tank North	02-A-659
EP7	T2	Sulfuric Acid Storage Tank South	02-A-660
ST1	B1	Boiler #1	99-A-833
ST2	B2	Boiler #2	99-A-834
ST3	B3	Fire Pump Diesel Engine	99-A-835
ST6	E1	MoO ₃ Unload to Storage Bin From Bags and Barrels	74-A-223-S1
ST7	E2	Pure Oxide Product Screening & Packaging	75-A-016-S1
ST8	E3	ADM/PO Calciner #1	75-A-017-S9
ST9	E5	Downgrade Calciner #1 & Product Bagger	97-A-137-S2
ST34	E6	Downgrade Calciner #1 Combustion	06-A-842
ST10	E7	AHM/ADM Dryer	78-A-053-S1
ST11	E8	Sodium Molybdate Drying, Screening & Packaging	85-A-090-S1
ST13	R1	MoS ₂ Transfer from Pit to Storage Bin	75-A-256-S2
ST14	R2	MoS ₂ Rail Car Unload	75-A-257-S2
ST15	R4	MoO ₃ Transfer from Roaster to Bin	75-A-255-S2
ST16	R5	Transfer MoS ₂ from Storage to Roaster	75-A-259-S2
ST18	R8	Lime Dust Unload	75-A-015-S1
ST19	R9	Lime Transfer to Silo	75-A-258-S1
ST20 ST21 (Bypass)	R10	Roaster #1	95-A-273-S2
	R11	Roaster #2	
	R15	Roaster #1 Burner	
	R16	Roaster #2 Burner	
ST43	R15	Roaster #1 Burner	02-A-626-S1
ST51	R16	Roaster #2 Burner	02-A-627-S1
ST45	R15	Roaster #1 Heat-Up	02-A-906
	R16	Roaster #2 Heat-Up	

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
ST23	W2	Sublimed Oxide Furnace #1	95-A-279-S2
ST24	W8	Sublimed Oxide Furnace #2	95-A-280-S2
ST25	W3	Molysulfide Kiln	94-A-001-S3
	W4	Molysulfide Kiln Afterburner	
ST26	W5	Molysulfide Kiln Burner	NA
ST27	W6	Molysulfide Kiln (Inert Gas Generator)	NA
ST28	W7	AOM Dryer	94-A-253-S2
ST31	R12	Sulfur Furnace Startup Burner	02-A-625-S1
ST32	E10	ADM Dryer	95-A-281
ST56	GEN9	Generator #9	11-A-097
ST57	GEN8	Generator #8	11-A-098
ST58	GEN7	Generator #7	11-A-099
ST59	GEN6	Generator #6	11-A-100
ST60	SX1	Rhenium Solvent Extraction A Train E1	01-A-998-S1
	SX2	Rhenium Solvent Extraction A Train E2	
	SX3	Rhenium Solvent Extraction B Train E1	
	SX4	Rhenium Solvent Extraction B Train E2	
	SX5	Rhenium Solvent Extraction S1	
	SX6	Rhenium Solvent Extraction S2	
	SX7	Rhenium Solvent Extraction Barren Organic Tank	
	SX8	Rhenium Solvent Loaded Organic Tank	
	SX9	Rhenium Solvent Extraction Raffinate Tank	
	SX10	Rhenium Solvent Extraction Loaded Solution Tank	
ST61	E13	AST Downgrade Dryer	14-A-503-S1
ENG1	ENG1	Gasoline Engine for Roaster #1	NA
ENG2	ENG2	Gasoline Engine for Roaster #2	NA
ENG3	ENG3	Gasoline Engine for Roaster #1 Cooling Tower	NA
ENG4	ENG4	Gasoline Engine for Roaster #2 Cooling Tower	NA
GASTK	GASTK	Gasoline Storage Tank	NA

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
T3	Acid Plant Fuel Oil Tank (5,300 gallons) (0.012 psia)
T4	Oil/Water Separating Tank (12,000 gallons) (0.012 psia)
T5	Main Fuel Oil Tank (300,0000 gallons) (0.012 psia)
T7	MoS ₂ Used Oil Tank (6,000 gallons) (0.012 psia)
CT1	Acid Plant Cooling Tower
CT2	Utilities Cooling Tower
ST3TK1	Diesel Storage Tank 1 for ST3 (0.012 psia)
ST3TK2	Diesel Storage Tank 2 for ST3 (0.012 psia)
NASH1	20,000 gallon Waste Tank (0.41 psia)

Insignificant Activities Equipment List (Small Unit Exemption) ⁽¹⁾

Insignificant Emission Unit Number	Insignificant Emission Unit Description
ADM1	ADM Bulk Bins
ADM2	ADM Packaging & Handling System
POC1	POC Bulk Bins
POC2	POC Packaging & Handling System
VAC1	In House Vacuum System
VAC2	POS Vacuum System
PNE1	POS Pneumatic System
FUR1	Furnace #1 Dump Station
FUR2	Furnace #2 Dump Station
POS1	Undensified Packing
POS2	POS Bulk Packing
TEC1	Tech Fine Milling Expansion
SUP1	Superfine Milling Expansion
VAC3	Packing Dedusting Vacuum System
TEC2	Tech Fine Packing
TEC3	Tech Packing
VAC4	Molysulfide Vacuum System
VAC5	Chemical Plant Vacuum System
AOM1	AOM Product Grinding
AOM2	Rotary Dryer
AOM3	Wet AOM Rotary Dryer
AOM4	Wet Wyssmount Dryer
AOM5	Wet AOM Grinder
AOM6	Wet AOM Feed System
NA1	Sodium Repack
FUG1	Tank T7 – Product Recycle Bag Dumping Station
FUG2	Roaster Recycle Dump Station for Furnace #1

⁽¹⁾ Emission Units qualify for Small Unit Exemption under 567 IAC 22.1(2)"w". Records shall be kept in accordance with 567 IAC 22.1(2)"w"(3).

Insignificant Activities Equipment List (Small Unit Exemption) ⁽²⁾

Insignificant Emission Unit Number	Insignificant Emission Unit Description
FUG3	Roaster Recycle Dump Station for Furnace #2
FUG4	Sample Dust Station
FUG5	Undensified Overflow Supersack Reclaim
FUG6	Undensified Recycle Supersack Unloading Station
FUG7	Undensified Downtype for Furnace #1 Supersack Filling
FUG8	Undensified Downtype for Furnace #2 Supersack Filling
FUG9	Precoat/Diatomaceous Earth Dumping Station
FUG10	Supersack Dump Station into Tank T12
FUG11	Diatomaceous Earth Supersack Bag Dumping Station
FUG12	Sulfuric Acid Filter & Dump Station
FUG13	Silica Sand Transfer #1
FUG14	Silica Sand Transfer #2
FUG15	Blender Feeder Hopper
FUG16	Sodium Precoat Tank Dumping Station
FUG17	Dry AOM Feed Hopper
FUG18	Roaster #1 Hearth 10 Dump Station
FUG19	Roaster #2 Hearth 10 Dump Station
FUG20	Sodium Molybdate Supersack Packing
FUG21	Sodium Molybdate Drum Packing
FUG22	Sodium Molybdate Valve Packing
FUG23	Wet AOM Packing
FUG24	AOM Valve Packing
FUG25	POS Furnace Dump Station
FUG26	POS Sand Hopper to Pneumatic System
FUG27	POS Repack Hopper
FUG28	Sodium Grade B Hopper
PLO1	PLO Bin Vent
PLO2	PLO Handling Systems

⁽¹⁾ Emission Units qualify for Small Unit Exemption under 567 IAC 22.1(2)"w". Records shall be kept in accordance with 567 IAC 22.1(2)"w"(3).

II. Plant-Wide Conditions

Facility Name: Climax Molybdenum Company

Permit Number: 03-TV-001R2

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

Permit Duration

The term of this permit is: Five (5) years from permit issuance

Commencing on: June 14, 2016

Ending on: June 13, 2021

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

Emission Limits

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

Opacity (visible emissions): 40% opacity

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

Sulfur Dioxide (SO₂): 500 parts per million by volume

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

Particulate Matter:

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

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

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

Fugitive Dust: Attainment and Unclassified Areas - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported or stored on 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"

III. Emission Point-Specific Conditions

Facility Name: Climax Molybdenum Company
Permit Number: 03-TV-001R2

Emission Point ID Numbers: EP1 & EP2

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
EP1	R13	Sulfuric Acid Tank/ Car Load/Unload West	H ₂ SO ₄	228 tons/hr.	02-A-657-S1
EP2	R14	Sulfuric Acid Tank/ Car Load/Unload North	H ₂ SO ₄	45.9 tons/hr.	02-A-658

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permits 02-A-657-S1 & 02-A-658
567 IAC 23.3(2)"d"

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

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/scf

Authority for Requirement: Iowa DNR Construction Permits 02-A-657-S1 & 02-A-658
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permits 02-A-657-S1 & 02-A-658
567 IAC 23.3(3)"e"

Emission Point Characteristics

The emission points shall conform to the specifications listed below.

Emission Point	Stack Height, (ft, from the ground)	Stack Opening (inches, dia.)	Exhaust Flow Rate (scfm)	Stack Temperature (°F)	Discharge Type	Authority For Requirement
EP1	12*	8	Displacement	70	Vertical Unobstructed	02-A-657-S1
EP2	12	6	1,500	70	Vertical Obstructed	02-A-658

* There is no stack on this unit. Emissions are released from the top of the rail car with the air displaced during loading.

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP4

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
R3	Rail Car Thawing	Natural Gas	3.28 MMBtu/hr.	NA

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

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

Pollutant: Particulate Matter

Emission Limit(s): 0.8 lb/MMBtu

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP6 & EP7

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Tank Capacity	Construction Permit
EP6	T1	Sulfuric Acid Storage Tank North	Sulfuric Acid	375,000 gallons	02-A-659
EP7	T2	Sulfuric Acid Storage Tank South	Sulfuric Acid	375,000 gallons	02-A-660

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40%⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permits 02-A-659 & 02-A-660
567 IAC 23.3(2)"d"

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

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permits 02-A-659 & 02-A-660
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permits 02-A-659 & 02-A-660
567 IAC 23.3(3)"e"

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 12

Stack Opening, (inches, dia.): 6

Exhaust Flow Rate (scfm): 1,500 when loading

Exhaust Temperature (°F): 70

Discharge Style: Vertical Obstructed

Authority for Requirement: Iowa DNR Construction Permits 02-A-659 & 02-A-660

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: ST1 & ST2

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
ST1	B1	Boiler #1	Natural Gas #2 Fuel Oil	34.5 MMBtu/hr. 260 gal/hr.	99-A-833
ST2	B2	Boiler #2	Natural Gas #2 Fuel Oil	34.5 MMBtu/hr. 260 gal/hr.	99-A-834

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permits 99-A-833 and 99-A-834
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: PM₁₀

Emission Limit(s): 0.5 lb/hr

Authority for Requirement: Iowa DNR Construction Permits 99-A-833 and 99-A-834

Pollutant: Particulate Matter

Emission Limit(s): 0.6 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permits 99-A-833 and 99-A-834
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 19.0 lb/hr, 2.5 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permits 99-A-833 and 99-A-834
567 IAC 23.3(3)"b"(2)

Pollutant: Sulfur Dioxide (SO₂) – When burning Natural Gas

Emission Limit(s): 500 ppmv

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

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 5.3 lb/hr

Authority for Requirement: Iowa DNR Construction Permits 99-A-833 and 99-A-834

Operational Limits & Requirements

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

Hours of operation:

1. The combined hours of operation for Boiler #1 and Boiler #2 on #2 fuel oil shall not exceed 1,752 hours per year.

Process throughput:

1. These units shall operate on either natural gas or #2 fuel oil.
2. The sulfur content of the fuel used shall not exceed 0.5% by weight.
3. Boiler #1 (permit 99-A-833) and Boiler #2 (permit 99-A-834) shall not operate simultaneously on #2 fuel oil.

Reporting & Record keeping:

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

1. The type of fuel used in these emission units and the sulfur content of the fuel used in these emission units.
2. When each emission unit is operating on #2 fuel oil the date, the time of startup, and time of shutdown shall be kept.
3. After the first twelve months of operation determine the total combined hours of operation that Boiler #1 and Boiler #2 operated on #2 fuel oil on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits 99-A-833 and 99-A-834

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 55

Stack Opening, (inches, dia.): 33.6

Exhaust Flow Rate (scfm): 6,800

Exhaust Temperature (°F): 560

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permits 99-A-833 and 99-A-834

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST3**Associated Equipment**

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
B3	Fire Pump Diesel Engine	NA	#2 Fuel Oil	13.2 gal/hr.	99-A-835

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: Iowa DNR Construction Permit 99-A-835
567 IAC 23.3(2)"d"

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

Pollutant: PM₁₀

Emission Limit(s): 0.5 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-835

Pollutant: Particulate Matter

Emission Limit(s): 0.6 lb/MMBtu

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 0.5 lb/hr, 2.5 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 99-A-835
567 IAC 23.3(3)"b"(2)

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 8.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-835

Operational Limits & Requirements

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

Hours of operation:

1. This unit shall not operate more than 50 hours per year.

Process throughput:

1. This unit shall operate on diesel fuel only.
2. The sulfur content of the fuel used shall not exceed 0.5% by weight.

Reporting & Record keeping:

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

1. The date, the hours of operation, type of fuel used, and the sulfur content of the fuel used.
2. After the first twelve months of operation determine the total hours of operation for this emission unit on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 99-A-835

NESHAP:

The emergency engine is subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).

According to 40 CFR 63.6590(a)(1)(iii) this compression ignition emergency engine, located at an area source, is an existing stationary RICE as it was constructed prior to June 12, 2006.

Operation and Maintenance Requirements 40 CFR 63.6603, 63.6625, 63.6640 and Tables 2d and 6 to Subpart ZZZZ

1. Change oil and filter every 500 hours of operation or annually, whichever comes first. (See 63.6625(i) for the oil analysis option to extend time frame of requirements.)
2. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary.
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
5. Install a non-resettable hour meter if one is not already installed.
6. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

Operating Limits 40 CFR 63.6640(f)

1. Any operation other than emergency operation, maintenance and testing, emergency demand response and operation in non-emergency situations (*up to*) 50 hours per year is prohibited.
2. There is no time limit on the use of emergency stationary RICE in emergency situations.
3. You may operate your emergency stationary RICE up to 100 combined hours per calendar year for maintenance checks and readiness testing, emergency demand response and periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. See 40 CFR 63.6640(f)(2) for additional information and restrictions.

4. You may operate your emergency stationary RICE up to 50 hours per calendar year for non-emergency situations, but those 50 hours are counted toward the 100 hours of maintenance and testing and emergency demand response. Except as provided in 40 CFR 63.6640(f)(4)(i) and (ii), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Recordkeeping Requirements 40 CFR 63.6655

1. Keep records of the maintenance conducted on the stationary RICE.
2. Keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. See 40 CFR 63.6655(f) for additional information.

Notification and Reporting Requirements 40 CFR 63.6645, 63.6650 and Table 2d to Subpart ZZZZ

1. An initial notification is not required per 40 CFR 63.6645(a)(5)
2. A report may be required for failure to perform the work practice requirements on the schedule required in Table 2d. (See Footnote 2 of Table 2d for more information.)

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

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 14.5

Stack Opening, (inches, dia.): 6

Exhaust Flow Rate (scfm): 400

Exhaust Temperature (°F): 450

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 99-A-835

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST6

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E1	MoO ₃ Unload to Storage Bin from Bags & Barrels	CD1: Baghouse	MoO ₃	12.5 tons/hr.	74-A-223-S1

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: Iowa DNR Construction Permit 74-A-223-S1
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: PM₁₀

Emission Limit(s): 0.30 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 74-A-223-S1

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.024 lb/ton, 0.18 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 74-A-223-S1
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material handled in this emissions unit shall not exceed 15,000 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 74-A-223-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 71.5

Stack Opening, (inches, dia.): 18

Exhaust Flow Rate (scfm): 1,800

Exhaust Temperature (°F): 70

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 74-A-223-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST7

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E2	AHM/ADM Product Screening & Packaging	CD2: Baghouse	AHM/ADM	1.05 tons/hr.	75-A-016-S1

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: Iowa DNR Construction Permit 75-A-016-S1
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: PM₁₀

Emission Limit(s): 0.35 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-016-S1

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 1.2 lb/ton, 3.1 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-016-S1
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material processed in this emissions unit shall not exceed 5,100 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 75-A-016-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 73.5

Stack Opening, (inches, dia.): 24

Exhaust Flow Rate (scfm): 1,958

Exhaust Temperature (°F): 120

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-016-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST8

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E3	ADM/PO Calciner #1 ⁽¹⁾	CD3: Baghouse CD42: Ammonia Scrubber	ADM/MoO ₃ Natural Gas	91,750 lbs/day 4.332 MMBtu/hr.	75-A-017-S9

⁽¹⁾ See "Emission Point Characteristics" section below for total equipment list.

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 %⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 75-A-017-S9
567 IAC 23.3(2)"d"

⁽²⁾ An exceedance of the indicator opacity of "No Visible Emissions" will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM₁₀

Emission Limit(s): 2.44 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-017-S9

Pollutant: Particulate Matter

Emission Limit(s): 2.44 lb/hr. 0.1 gr/scf

Authority for Requirement: Iowa DNR Construction Permit 75-A-017-S9
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 75-A-017-S9
567 IAC 23.3(3)"e"

Operational Limits & Requirements

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

Process throughput:

1. Calciner EU3 is limited to a maximum throughput of 80,880 pounds per day of Pure Oxide Calcined (PO).

Control equipment parameters:

1. The Ammonia Scrubber (CE CD42) is not required to operate all the time when the ADM/PO Calciner is in operation.
2. The owner or operator shall operate, inspect, and maintain the control equipment according to manufacturer's specifications.

Reporting & Record keeping:

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

1. The owner or operator shall record the amount of PO calcined in this ADM/PO Calciner in pounds, on a daily basis.⁽³⁾
2. The owner or operator shall maintain records of the inspection and maintenance of the control equipment.

Authority for Requirement: Iowa DNR Construction Permit 75-A-017-S9

⁽³⁾ Please note the amount of PO calcined will be measured after processing in the ADM/PO Calciner.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 111

Stack Opening, (inches, dia.): 30

Exhaust Flow Rate (scfm): 16,200

Exhaust Temperature (°F): 250

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-017-S9

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

Emission Unit ID	Emission Unit Description	Maximum Rated Capacity	Control Device
EU T-3	Ammonia Dissolution Tank	7,800 gallons	CD3/CD42
EU T-4	Adjustment Tank	7,800 gallons	CD3/CD42
EU T-5	Adjustment Tank	7,800 gallons	CD3/CD42
EU T-6	Crystallizer Feed Tank	7,800 gallons	CD3/CD42
EU NaMo Adjustment	Solution Tank	6,135 gallons	CD3/CD42
EU 20K	Solution Tank	14,000 gallons	CD3/CD42
EU CR-5 feed	Solution Tank	6,135 gallons	CD3/CD42
EU T-20	ML Tank	800 gallons	CD3/CD42
EU GML	ML Bulk Storage Tank	6,135 gallons	CD3/CD42
EU CR-5 Dump	Solution Tank	6,135 gallons	CD3/CD42
EU BDF	Drum Filter	400 gallons	CD3/CD42
EU T-13	Neutralization Tank	11,000 gallons	CD3/CD42
EU T-9	Aqua Ammonia Storage Tank	5,500 gallons	CD3/CD42

Emission Unit ID	Emission Unit Description	Maximum Rated Capacity	Control Device
EU T-7	Solution Tank	6,135 gallons	CD3/CD42
EU Sump	Intermediate Solution / Slurry Tank	5,000 gallons	CD3/CD42
EU T-12	Ammonia Dissolution Tank	6,135 gallons	CD3/CD42
EU CR-2	Crystallizer (Tank)	6,135 gallons	CD3/CD42
EU LDF	Drum Filter	300 gallons	CD3/CD42
EU Mud Tank	Slurry Tank	5,500 gallons	CD3/CD42
EU T-3C	Ammonia Dissolution Tank / Filter Feed Tank	10,000 gallons	CD3/CD42
EU KDF Feed	Drum Filter Feed Tank	800 gallons	CD3/CD42
EU KD Filter	Drum Filter	200 gallons	CD3/CD42
EU Sep	Slurry Tank	9,000 gallons	CD3/CD42
EU SPBT	Solution Tank	18,000 gallons	CD3/CD42
EU NPBT	Solution Tank	18,000 gallons	CD3/CD42
EU T-3B	Ammonia Dissolution Tank	10,000 gallons	CD42*
EU H1 Tank	Slurry Tank	800 gallons	CD42*
EU V-1	Coalescence Tank	100 gallons	CD3/CD42
EU Hoesch 1 Filter	Pressure Plate Filter	200 cfm	CD42*
EU Hoesch 2 Filter	Pressure Plate Filter	200 cfm	CD42*
EU CE-5 Hopper	Centrifuge Discharge / Dryer Feed Hopper	200 cfm	CD3/CD42
EU CE-5	Centrifuge #5	200 cfm	CD3/CD42
EU CE-2 Hopper	Centrifuge Discharge / Dryer Feed Hopper	200 cfm	CD3/CD42
EU CE-2	Centrifuge #2	200 cfm	CD3/CD42
EU AHM Dryer Hood	Fugitive Fume Collection	200 cfm	CD3/CD42

*: These units vent through the ammonia scrubber CE CD42 only

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
(Required for CD3 only)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST9

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E5	Downgrade Calciner #1 & Product Bagging	CD21: Baghouse	Downgrade	0.20 tons/hr.	97-A-137-S2

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: Iowa DNR Construction Permit 97-A-137-S2
567 IAC 23.3(2)"d"

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

Pollutant: PM₁₀

Emission Limit(s): 1.10 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 97-A-137-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/scf

Authority for Requirement: Iowa DNR Construction Permit 97-A-137-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. Downgrade Calciner #1 (EU5) is limited to a maximum throughput of 11,760 pounds per day of wet solids feed.
2. Downgrade Calciner #1 (EU5) shall be fired by natural gas or propane only.

Reporting & Record keeping:

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

- 1. Record the amount of wet solids fed to the Downgrade Calciner #1 (EU5) in pounds per day.
Authority for Requirement: Iowa DNR Construction Permit 97-A-137-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 86.6

Stack Opening, (inches, dia.): 10

Exhaust Flow Rate (scfm): 1,260

Exhaust Temperature (°F): 340

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 97-A-137-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST34

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E6	Downgrade Calciner #1 Combustion	NA	Natural Gas	2.5 MMBtu/hr.	06-A-842

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: Iowa DNR Construction Permit 06-A-842
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: PM₁₀

Emission Limit(s): 0.30 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 06-A-842

Pollutant: Particulate Matter

Emission Limit(s): 0.30 lb/hr., 0.6 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 06-A-842
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 06-A-842
567 IAC 23.3(3)"e"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 73.7

Stack Opening, (inches, dia.): 12

Exhaust Flow Rate (scfm): 475

Exhaust Temperature (°F): 150

Discharge Style: Vertical without rain cap or with Unobstructing rain cap

Authority for Requirement: Iowa DNR Construction Permit 06-A-842

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST10

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E7	AHM/ADM Dryer	CD4: Baghouse	AHM/ADM	1.10 tons/hr.	78-A-053-S1

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: Iowa DNR Construction Permit 78-A-053-S1
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: PM₁₀

Emission Limit(s): 0.27 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 78-A-053-S1

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.25 lb/ton, 0.23 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 78-A-053-S1
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material dried in this emissions unit shall not exceed 1,830 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material dried in this emissions units (tons); and
 - b. The rolling 12-month total amount of material dried in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 78-A-053-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 74

Stack Opening, (inches, dia.): 17

Exhaust Flow Rate (scfm): 1,606

Exhaust Temperature (°F): 200

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 78-A-053-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST11

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E8	Sodium Molybdate Drying, Screening, & Packaging	CD5: Baghouse	NAMo/ADM/AOM, Natural Gas	0.30 tons/hr., 0.4 MMBtu/hr.	85-A-090-S1

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: Iowa DNR Construction Permit 85-A-090-S1
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: PM₁₀

Emission Limit(s): 0.21 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 85-A-090-S1

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.70 lb/ton, 0.66 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 85-A-090-S1
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

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

Operational Limits & Requirements

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

Process throughput:

1. The amount of material dried in this emissions unit shall not exceed 1,900 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material dried in this emissions units (tons); and
 - b. The rolling 12-month total amount of material dried in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 85-A-090-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 57

Stack Opening, (inches, dia.): 8

Exhaust Flow Rate (scfm): 1,239

Exhaust Temperature (°F): 160

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 85-A-090-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST13

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R1	MoS ₂ Transfer from Pit to Storage Bin	CD6: Baghouse	MoS ₂	90 tons/hr.	75-A-256-S2

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: Iowa DNR Construction Permit 75-A-256-S2
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: PM₁₀

Emission Limit(s): 0.86 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-256-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.01 lb/ton, 0.21 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-256-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material handled in this emissions unit shall not exceed 41,000 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 75-A-256-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 93

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 5,000

Exhaust Temperature (°F): 70

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-256-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST14

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R2	MoS ₂ Rail Car Unload	CD7: Baghouse	MoS ₂	100 tons/hr.	75-A-257-S2

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: Iowa DNR Construction Permit 75-A-257-S2
567 IAC 23.3(2)"d"

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

Pollutant: PM₁₀

Emission Limit(s): 3.0 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-257-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.03 lb/ton, 0.62 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-257-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material handled in this emissions unit shall not exceed 41,000 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer's recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 75-A-257-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 63.5

Stack Opening, (inches, dia.): 10

Exhaust Flow Rate (scfm): 5,342

Exhaust Temperature (°F): 70

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-256-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST15

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R4	MoO ₃ Transfer from Roaster to Bin	CD8: Baghouse	MoO ₃	5 tons/hr.	75-A-255-S2

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: Iowa DNR Construction Permit 75-A-255-S2
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: PM₁₀

Emission Limit(s): 0.89 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-255-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.18 lb/ton, 3.15 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-255-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material handled in this emissions unit shall not exceed 35,000 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 75-A-255-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 99

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 3,537

Exhaust Temperature (°F): 150

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-255-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST16

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R5	Transfer MoS2 from Storage to Roaster	CD9: Baghouse	MoS ₂	90 tons/hr.	75-A-259-S2

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: Iowa DNR Construction Permit 75-A-259-S2
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: PM₁₀

Emission Limit(s): 1.89 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-259-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.021 lb/ton, 0.43 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-259-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material handled in this emissions unit shall not exceed 41,000 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 75-A-259-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 99

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 5,039

Exhaust Temperature (°F): 100

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-259-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST18

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R8	Lime Dust Unload	CD11: Baghouse	Limestone	5 tons/hr.	75-A-015-S1

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: Iowa DNR Construction Permit 75-A-015-S1
567 IAC 23.3(2)"d"

Pollutant: PM₁₀

Emission Limit(s): 0.6 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-015-S1

Pollutant: Particulate Matter

Emission Limit(s): 1.25 lb/hr., 0.25 lb/ton, 0.14 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-015-S1
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material handled in this emissions unit shall not exceed 1,100 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 75-A-015-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 42.5

Stack Opening, (inches): 22 x 32

Exhaust Flow Rate (scfm): 500

Exhaust Temperature (°F): 70

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-015-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST19

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R9	Lime Transfer to Silo	CD12: Baghouse	Limestone	20 tons/hr.	75-A-258-S1

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: Iowa DNR Construction Permit 75-A-258-S1
567 IAC 23.3(2)"d"

Pollutant: PM₁₀

Emission Limit(s): 2.5 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-258-S1

Pollutant: Particulate Matter

Emission Limit(s): 5 lb/hr., 0.25 lb/ton, 0.23 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 75-A-258-S1
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The filling of the storage silo (EU R9) is limited to a maximum of 15 hours per day, between the hours of 6 AM and 9 PM.
2. The amount of material handled in this emissions unit shall not exceed 1,850 tons in any rolling 12 month period.
3. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain daily records on the number of hours that storage silo (EU R9) is filled. This shall include the time(s) of day during which the silo was filled. This daily recordkeeping is only required on the days when the silo is filled.
2. The permittee shall maintain the following monthly records:
 - a. The amount of material handled in this emissions units (tons); and
 - b. The rolling 12-month total amount of material handled in this emissions unit (tons).
3. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 75-A-258-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 42.5

Stack Opening, (inches): 22 x 32

Exhaust Flow Rate (scfm): 500

Exhaust Temperature (°F): 70

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-0258-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST20, ST21 (Emergency Bypass)

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R10	Roaster #1	CD13: Sulfuric Acid Plant	MoS ₂	17.08 tons/hr.	95-A-273-S2
R11	Roaster #2		MoS ₂	17.08 tons/hr.	
R15	Roaster #1 Burner		Natural Gas	19.124 MMBtu/hr.	
R16	Roaster #2 Burner		Natural Gas	19.124 MMBtu/hr.	

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 95-A-273-S2
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

Emission Limit(s): 0.1 gr/scf, 5.63 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 95-A-273-S2

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 105 lb/hr., 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 95-A-273-S2
567 IAC 23.3(3)"e"

Pollutant: Sulfuric Acid (H₂SO₄)

Emission Limit(s): 5.63 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 95-A-273-S2

Operational Limits & Requirements

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

Operating Limits:

1. To maintain Project 08-300 as a minor project for Prevention of Significant Deterioration (PSD) for SO₂ emissions, the owner or operator shall have the following limits starting when the #1 and #2 molybdenum roasters start operation after the replacement of the #1 wet

electrostatic precipitator and the final absorption tower until a date ten (10) years after the start of operation (02/18/2010) after the #2 wet electrostatic precipitator replacement:

- a. Project 08-300 includes the replacement of the #1 and #2 wet electrostatic precipitators in the gas cleaning section of the sulfuric acid plant as well as the final adsorption tower of the sulfuric acid plant.
- b. The baseline actual emissions for the project are equal to 159.04 tons per year for SO₂. The baseline actual emissions shall remain unchanged throughout the ten (10) year period.
- c. The owner or operator shall determine the actual annual emissions for the #1 and #2 molybdenum roasters, in tons per year on a calendar-year basis.
- d. Actual annual emissions minus the baseline actual emissions from the project shall not exceed the PSD significant levels of 39.4 tons per calendar year of SO₂. If the emission increases from Project 08-300, do not exceed the PSD significance levels, these limits shall no longer apply 10 years after the date of start of operation (02/18/2010). If these limits are exceeded prior to expiration of the 10 year period, the owner or operator shall submit a report pursuant to 567 IAC 33.3(18)"f"(7).

Reporting & Record keeping:

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

1. For the purposes of maintaining Project 08-300 as a minor project for Prevention of Significant Deterioration (PSD), the owner or operator shall have the following monitoring conditions starting when the #1 and #2 molybdenum roasters start operation after the replacement of the #1 wet electrostatic precipitator until a date ten (10) years after the start of operation (02/18/2010) after the #2 wet electrostatic precipitator replacement:
 - a. Record the date the #1 and #2 molybdenum roasters start operation after the replacement of the #1 wet electrostatic precipitator and the final absorption tower.
 - b. Record the date the #1 and #2 molybdenum roasters start operation after the replacement of the #2 wet electrostatic precipitator.
 - c. Record annually the actual SO₂ emissions from the #1 and #2 molybdenum roasters in tons per year on a calendar-year basis.
 - d. Record annually the ton per year value of the actual emissions minus the baseline actual emissions for SO₂.

Authority for Requirement: Iowa DNR Construction Permit 95-A-273-S2

Bypass:

Periods of operation:

1. If the emergency stack (ST21) is used during periods where molybdenum is actively charged into the roasters more than four (4) times in a calendar year, Climax shall apply for a construction permit modification.

Authority for Requirement: DNR Project #00-235 (DNR letter dated February 4, 2002, See Appendix A of this permit)

Emission Calculations:

1. SO₂ emitted during the use of the emergency stack (ST21) shall be determined by a mass balance calculation approved by the Department.
 - a. Any changes made to the mass balance calculation used shall be submitted to the DNR Air Quality Bureau for approval.

Reporting & Record keeping:

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

1. The following information shall be recorded for each time the emergency stack (ST21) is used;
 - a. The date, time, and duration of the emergency stack use.
 - b. The amount of SO₂ emitted during the use.
 - c. The total number of uses of the emergency stack for that calendar year.
2. The owner/operator shall notify the DNR Air Quality Bureau in writing within 2 weeks of the fifth use of the emergency stack within a calendar year.
3. The owner/operator shall submit a construction permit application to the DNR Air Quality Bureau within 90 days from the fifth use of the emergency stack within a calendar year.

Authority for Requirement: 567 IAC 22.108(14)

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 150

Stack Opening, (inches, dia.): 66

Exhaust Flow Rate (scfm): 37,700

Exhaust Temperature (°F): 180

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 95-A-273-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: ST43 & ST51

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
ST43	R15	Roaster #1 Burner (when bypassing acid plant)	Natural Gas	19.124 MMBtu/hr.	02-A-626-S1
ST51	R16	Roaster #2 Burner (when bypassing acid plant)	Natural Gas	19.124 MMBtu/hr.	02-A-627-S1

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permits 02-A-626-S1 & 02-A-627-S1
567 IAC 23.3(2)"d"

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

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permits 02-A-626-S1 & 02-A-627-S1
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permits 02-A-626-S1 & 02-A-627-S1
567 IAC 23.3(3)"e"

Operational Limits & Requirements

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

Hours of operation:

1. These emission units, R15 and R16, shall not operate more than 720 hours (each) per rolling twelve-month period.
2. These emission units shall be fired only on natural gas.

Reporting & Record keeping:

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

1. The permit holder, owner and operator of the facility shall maintain a record of the hours of operation for each emission unit, R15 & R16, for each month of operation.
2. The hours of operation for this emission unit shall be calculated and recorded by the permit holder, owner and operator of the facility on a twelve-month rolling basis, for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits 02-A-626-S1 & 02-A-627-S1

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 99

Stack Opening, (inches, dia.): 36

Exhaust Flow Rate (scfm): 650

Exhaust Temperature (°F): 1000

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permits 02-A-626-S1 & 02-A-627-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST45

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
R15	Roaster #1 Burner Heat-Up	NA	Natural Gas	19.124 MMBtu/hr.	02-A-906
R16	Roaster #2 Burner Heat-Up		Natural Gas	19.124 MMBtu/hr.	

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 02-A-906
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

Emission Limit(s): 0.01 gr./dscf

Authority for Requirement: Iowa DNR Construction Permit 02-A-906

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 02-A-906
567 IAC 23.3(3)"e"

Operational Limits & Requirements

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

Process throughput:

1. This emission point shall only discharge the products of Natural Gas combustion.

Authority for Requirement: Iowa DNR Construction Permit 02-A-906

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 82
Stack Opening, (inches, dia.): 24
Exhaust Flow Rate (scfm): 9,300
Exhaust Temperature (°F): 450
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 02-A-906

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST23

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
W2	Sublimed Oxide Furnace #1	CD19: Baghouse	MoO ₃	0.76 tons/hr.	95-A-279-S2

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: Iowa DNR Construction Permit 95-A-279-S2
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: PM₁₀

Emission Limit(s): 0.70 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 95-A-279-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.92 lb/ton, 1.1 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 95-A-279-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material processed in this emissions unit shall not exceed 2,400 tons in any rolling 12 month period.

Control equipment parameters:

1. The permittee shall follow the specific startup and shutdown procedures provided by the baghouse vendor and shall maintain a record of periods of startup, shutdown or malfunction.
2. Dust collected in the baghouse shall be discharged only into closed containers without creating additional air emissions.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material processed in this emissions units (tons); and
 - b. The rolling 12-month total amount of material processed in this emissions unit (tons).
2. The permittee shall perform routine monitoring and routine maintenance according to the vendor’s specifications. A log of actual inspections, observations, and maintenance shall be made available to the Iowa DNR personnel upon request.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 95-A-279-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

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

Stack Opening, (inches): 24 x 22

Exhaust Flow Rate (scfm): 4,729

Exhaust Temperature (°F): 160

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 95-A-279-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: ST24

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
W8	Sublimed Oxide Furnace #2	CD20: Baghouse	MoO ₃	0.76 tons/hr.	95-A-280-S2

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: Iowa DNR Construction Permit 95-A-280-S2
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: PM₁₀

Emission Limit(s): 1.0 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 95-A-280-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 1.97 lb/ton, 2.4 tons/yr.

Authority for Requirement: Iowa DNR Construction Permit 95-A-280-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material processed in this emissions unit shall not exceed 2,400 tons in any rolling 12 month period.

Control equipment parameters:

1. The permittee shall follow the specific startup and shutdown procedures provided by the baghouse vendor and shall maintain a record of periods of startup, shutdown or malfunction.
2. Dust collected in the baghouse shall be discharged only into closed containers without creating additional air emissions.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material processed in this emissions units (tons); and
 - b. The rolling 12-month total amount of material processed in this emissions unit (tons).
2. The permittee shall perform routine monitoring and routine maintenance according to the vendor’s specifications. A log of actual inspections, observations, and maintenance shall be made available to the Iowa DNR personnel upon request.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 95-A-280-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

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

Stack Opening, (inches): 24 x 22

Exhaust Flow Rate (scfm): 5,708

Exhaust Temperature (°F): 125

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 95-A-280-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST25

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
W3	Molysulfide Kiln	See Emission Point Characteristics	MoS ₂	0.82 tons/hr.	94-A-001-S3
W4	Molysulfide Kiln Afterburner		Natural Gas	3.1 MMBtu/hr.	

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 94-A-001-S3
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: PM₁₀

Emission Limit(s): 0.38 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 94-A-001-S3

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/scf

Authority for Requirement: Iowa DNR Construction Permit 94-A-001-S3
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 0.38 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 94-A-001-S3

Operational Limits & Requirements

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

Control equipment parameters:

1. The owner or operator shall maintain the control equipment according to manufacturer's specifications and maintenance schedule or per written facility specific operation and maintenance plan.

Reporting & Record keeping:

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

1. The owner or operator shall maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of the control equipment.

Authority for Requirement: Iowa DNR Construction Permit 94-A-001-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 69

Stack Opening, (inches, dia.): 10

Exhaust Flow Rate (scfm): 1,910

Exhaust Temperature (°F): 95

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 94-A-001-S3

The following emission units exhaust through this emission point:

Emission Unit	Control Equipment
Molysulfide Kiln (W3)	Settling Pots (CD 41)
	Electrostatic Precipitator (CD 15) and Electrostatic Precipitator (CD 39) – both operating in parallel
	Afterburner (W4)
	Cooler (CD 42) or Cooler (CD 43) – only one operating at a time
	Baghouse (CD 16) or Baghouse (CD 40) – only one operating at a time
	Caustic Scrubber (CD 17)
Molysulfide Kiln Afterburner (W4)	Cooler (CD 42) or Cooler (CD 43) – only one operating at a time
	Baghouse (CD 16) or Baghouse (CD 40) – only one operating at a time
	Caustic Scrubber (CD 17)

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No
(Required for CD 15, CD 39, & CD 17)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST26

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
W5	Molysulfide Kiln Burner	NA	Natural Gas	0.8 MMBtu/hr.	NA

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

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

Pollutant: Particulate Matter

Emission Limit(s): 0.8 lb/MMBtu

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST27

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
W6	Molysulfide Kiln (Inert Gas Generator)	Natural Gas	0.47 MMBtu/hr.	NA

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

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

Pollutant: Particulate Matter

Emission Limit(s): 0.8 lb/MMBtu

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST28

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
W7	AOM Dryer	CD18: Baghouse	AOM	0.34 tons/hr.	94-A-253-S2

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: Iowa DNR Construction Permit 94-A-253-S2
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: PM₁₀

Emission Limit(s): 0.16 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 94-A-253-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/scf, 0.47 lb/ton, 0.28 ton/yr.

Authority for Requirement: Iowa DNR Construction Permit 94-A-253-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. The amount of material dried in this emissions unit shall not exceed 1,200 tons in any rolling 12 month period.
2. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.

Reporting & Record keeping:

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

1. The permittee shall maintain the following monthly records:
 - a. The amount of material dried in this emissions units (tons); and
 - b. The rolling 12-month total amount of material dried in this emissions unit (tons).
2. The permittee shall develop and follow an operation and maintenance plan in order to maintain the fabric filter baghouse. The plan shall include the manufacturer’s recommendations. Records shall be maintained of the inspections performed and the maintenance work done on the baghouse.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). At a minimum the permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement:
Iowa DNR Construction Permit 94-A-253-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 71

Stack Opening, (inches, dia.): 12

Exhaust Flow Rate (scfm): 4,140

Exhaust Temperature (°F): 180

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 94-A-253-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST31

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
R12	Sulfur Furnace Startup Burner	Natural Gas #2 Fuel Oil	25 MMBtu/hr. 300 gal/hr.	02-A-625-S1

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: Iowa DNR Construction Permit 02-A-625-S1
567 IAC 23.3(2)"d"

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

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 02-A-625-S1
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 2.5 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 02-A-625-S1
567 IAC 23.3(3)"b"(2)

Operational Limits & Requirements

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

Hours of operation:

1. This Emission Unit shall not operate more than 150 hours per rolling twelve-month period.

Process throughput:

1. This unit shall only combust natural gas or #2 fuel oil as fuel.
2. This unit shall not use any fuel oil with a sulfur content greater than 0.05%, by weight.

Reporting & Record keeping:

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

1. The owner or operator shall maintain a record of the number of hours this unit operates, for each instance of operation, along with the type of fuel combusted.
2. The owner or operator shall update the twelve-month rolling total hours of operation on a monthly basis.
3. If fuel oil is combusted, the owner or operator shall record or retain supplier’s certification of sulfur content of the fuel oil used in this unit.

Authority for Requirement: Iowa DNR Construction Permit 02-A-625-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 41

Stack Opening, (inches, dia.): 12

Exhaust Flow Rate (scfm): 15,120

Exhaust Temperature (°F): 900

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-625-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST32

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E10	ADM Dryer	CD22: Baghouse	ADM	1.32 tons/hr.	95-A-281

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

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

Pollutant: Particulate Matter

Emission Limit(s): 0.019 gr/scf, 0.26 lb/hr, 1.14 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 95-A-281

Operational Limits & Requirements

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

Control equipment parameters:

1. The owner shall follow the specific startup and shutdown procedures provided by the baghouse vendor and shall maintain a record of periods of startup, shutdown or malfunction.
2. Dust collected in the baghouse shall be discharged only into closed containers without creating additional air emissions.

Reporting & Record keeping:

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

1. The owner shall perform routine monitoring and routine maintenance according to vendor's specifications. A log of actual inspections, observations, and maintenance shall be made available to the IDNR personnel upon request.

Authority for Requirement: Iowa DNR Construction Permit 95-A-281

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 76
Stack Opening, (inches, dia.): 10
Exhaust Flow Rate (acfm): 2,000
Exhaust Temperature (°F): 200
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 95-A-281

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: ST56, ST57, ST58, ST59

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
ST56	GEN9	Generator #9	#2 Diesel Fuel Oil	138 gal/hr. (2937 bhp)	11-A-097
ST57	GEN8	Generator #8	#2 Diesel Fuel Oil	138 gal/hr. (2937 bhp)	11-A-098
ST58	GEN7	Generator #7	#2 Diesel Fuel Oil	138 gal/hr. (2937 bhp)	11-A-099
ST59	GEN6	Generator #6	#2 Diesel Fuel Oil	138 gal/hr. (2937 bhp)	11-A-100

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40%^{(1),(2)}

Authority for Requirement: Iowa DNR Construction Permits 11-A-097, 11-A-098, 11-A-099, 11-A-100
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: PM₁₀

Emission Limit(s): 1.21 lb/hr., 0.76 tons/yr.⁽³⁾

Authority for Requirement: Iowa DNR Construction Permits 11-A-097, 11-A-098, 11-A-099, 11-A-100

Pollutant: Particulate Matter

Emission Limit(s): 1.21 lb/hr., 0.76 tons/yr.⁽³⁾

Authority for Requirement: Iowa DNR Construction Permits 11-A-097, 11-A-098, 11-A-099, 11-A-100

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 34.2 lb/hr., 21.6 tons/yr.⁽³⁾

Authority for Requirement: Iowa DNR Construction Permits 11-A-097, 11-A-098, 11-A-099, 11-A-100

⁽²⁾ See "NSPS/NESHAP Requirements" in the Operating Limits section.

⁽³⁾ Combined limit for EU-GEN6, EU-GEN7, EU-GEN8, & EU-GEN9

Operational Limits & Requirements

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

Process throughput:

1. These engines are limited to burning diesel fuel oil only.
2. The total amount of fuel burned in engines EU GEN6, EU GEN7, EU GEN8, and EU GEN9 shall not exceed 174,000 gallons in any rolling 12-month period.
3. In accordance with §60.4207(b), the diesel fuel oil burned in this engine shall meet the following specifications from 40 CFR 80.510(b) for nonroad diesel fuel:
 - a. a maximum sulfur content of 15 ppm (0.0015%) by weight; and
 - b. a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.
4. In accordance with §60.4211(a), this engine shall be operated and maintained in accordance with the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the manufacturer. The owner or operator may only change engine settings that are permitted by the manufacturer.

Reporting & Record keeping:

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

1. The owner or operator shall maintain the following monthly records on engines EU GEN6, EU GEN7, EU GEN8, and EU GEN9:
 - a. the total amount of fuel oil burned (gallons); and
 - b. the rolling 12-month total amount of the fuel oil burned (gallons).
2. The owner or operator of the engine shall comply with the requirements of condition 3 of the Process Throughput section listed above by one of the following methods:
 - a. have the fuel supplier certify that the fuel delivered meets the definition of non-road diesel fuel as defined in 40 CFR 80.510(b);
 - b. obtain a fuel analysis from the supplier showing the sulfur content and cetane index or aromatic content of the fuel delivered; or
 - c. perform an analysis of the fuel to determine the sulfur content and cetane index or aromatic content of the fuel received.

NSPS/NESHAP Requirements: (Each engine shall comply with the following requirements)

1. These engines are subject to 40 CFR Part 60 NSPS Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (IAC 23.1(2)“yyy”). Each engine is a 2010 model year stationary internal combustion engine.
 - a. In accordance with §60.4211(c), each engine must be certified by its manufacturer to comply with the emissions standards from §60.4204 (b) and §60.4201 (a). The emission standards that each engine must be certified by the manufacturer to meet are:

Pollutant	Emission Standard	Basis
Particulate Matter (PM)	0.20 grams/kW-hr	§ 89.112 Table 1
NMHC ¹ + NO _x	6.4 grams/kW-hr	§ 89.112 Table 1
Carbon Monoxide (CO)	3.5 grams/kW-hr	§ 89.112 Table 1
Opacity – acceleration mode	20%	§ 89.113 (a)(1)
Opacity – lugging mode	15%	§ 89.113 (a)(2)
Opacity – peaks in acceleration or lugging modes	50%	§ 89.113 (a)(3)

¹ Non-methane hydrocarbon

- b. In accordance with §60.4211(c), the owner or operator must comply with the required NSPS emissions standards by purchasing an engine certified by its manufacturer to meet the applicable emission standards for the same model year and engine power. Each engine must be installed and configured to the manufacturer’s specifications. Provided these requirements are satisfied, no further demonstration of compliance with the emission standards from §60.4204 (b) and §60.4201 (a) is required.
2. Each engine is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (567 IAC 23.1(4)“cz”, 40 CFR Part 63, Subpart ZZZZ). These engines are new reciprocating internal combustion engines (RICE). In accordance with §63.6590 (c), each engine must comply with the requirements of Subpart ZZZZ by meeting the requirements of NSPS subpart IIII.

Authority for Requirement: Iowa DNR Construction Permits 11-A-097, 11-A-098, 11-A-099, 11-A-100
567 IAC 23.1(2)"yyy"
40 CFR 60 Subpart IIII
567 IAC 23.1(4)"cz"
40 CFR 63 Subpart ZZZZ

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 17.1

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 6,687

Exhaust Temperature (°F): 752

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permits 11-A-097, 11-A-098, 11-A-099,
11-A-100

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST60

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
SX1	Rhenium Solvent Extraction A Train E1	NA	Weak Acid/ Organic Solution	1185.6 lb/hr	01-A-998-S1
SX2	Rhenium Solvent Extraction A Train E2		Weak Acid/ Organic Solution	1185.6 lb/hr	
SX3	Rhenium Solvent Extraction B Train E1		Weak Acid/ Organic Solution	1185.6 lb/hr	
SX4	Rhenium Solvent Extraction B Train E2		Weak Acid/ Organic Solution	1185.6 lb/hr	
SX5	Rhenium Solvent Extraction S1		Weak Acid/ Organic Solution	157.8 lb/hr	
SX6	Rhenium Solvent Extraction S2		Weak Acid/ Organic Solution	157.8 lb/hr	
SX7	Rhenium Solvent Extraction Barren Organic Tank		Weak Acid/ Organic Solution	1000 gallons	
SX8	Rhenium Solvent Loaded Organic Tank		Weak Acid/ Organic Solution	1000 gallons	
SX9	Rhenium Solvent Extraction Raffinate Tank		Weak Acid/ Organic Solution	1000 gallons	
SX10	Rhenium Solvent Extraction Loaded Solution Tank		Weak Acid/ Organic Solution	1000 gallons	

Applicable Requirements

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

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

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

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 62

Stack Opening, (inches, dia.): 4

Exhaust Flow Rate (scfm): 200

Exhaust Temperature (°F): 90

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 01-A-998-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ST61

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
E13	AST Downgrade Dryer	CE-41: Baghouse	Molybdenum Compounds/ Natural Gas	10,400 lbs/hr./ 4.0 MMBtu	14-A-503-S1

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: Iowa DNR Construction Permit 14-A-503-S1
567 IAC 23.3(2)"d"

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

Pollutant: PM₁₀

Emission Limit(s): 0.65 lb/hr.

Authority for Requirement: Iowa DNR Construction Permit 14-A-503-S1

Pollutant: Particulate Matter

Emission Limit(s): 0.65 lb/hr., 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 14-A-503-S1
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppm

Authority for Requirement: Iowa DNR Construction Permit 14-A-503-S1
567 IAC 23.3(3)"e"

Operational Limits & Requirements

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

Control equipment parameters:

1. The permittee shall operate and maintain the fabric filter baghouse in accordance with the recommendations of the manufacturer.
2. The differential pressure drop across the fabric filter baghouse shall be maintained between 2 and 6 inches water column while the equipment is in operation.

Reporting & Record keeping:

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

1. The permittee shall maintain records on the maintenance performed on the fabric filter baghouse.
2. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a weekly basis.

Authority for Requirement: Iowa DNR Construction Permit 14-A-503-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

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

Stack Opening, (inches, dia.): 32

Exhaust Flow Rate (scfm): 4,000

Exhaust Temperature (°F): 200

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 14-A-503-S1

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: ENG1, ENG2, ENG3, ENG4

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
ENG1	ENG1	Drive Engine for Roaster #1	Gasoline	37 hp	NA
ENG2	ENG2	Drive Engine for Roaster #2	Gasoline	37 hp	NA
ENG3	ENG3	Shaft Cooling Engine for Roaster #1	Gasoline	30 hp	NA
ENG4	ENG4	Shaft Cooling Engine for Roaster #2	Gasoline	65.9 hp	NA

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40 %

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

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/scf

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 2.5 lb/MMBtu

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

Operational Limits & Requirements

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

NESHAP:

These engines are subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(1)(iii) these spark ignition engines, located at an area source, are existing stationary RICE as it was constructed prior to June 12, 2006.

Compliance Date

Per 63.6595(a)(1) you must comply with the provisions of subpart ZZZZ that are applicable by October 19, 2013.

Operation and Maintenance Requirements 40 CFR 63.6603, 63.6625, 63.6640 and Tables 2d and 6 to Subpart ZZZZ

1. Change oil and filter every 1,440 hours of operation or annually, whichever comes first. (See 63.6625(j) for the oil analysis option to extend time frame of requirements.)
2. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.
3. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.
4. Operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
5. Minimize the engines' time spent at idle during startup and minimize the engines' startup time to a period needed for appropriate and safe loading of the engines, not to exceed 30 minutes.

Recordkeeping Requirements 40 CFR 63.6655

1. Keep records of the maintenance conducted on the stationary RICE.

Notification and Reporting Requirements 40 CFR 63.6645, 63.6650 and Table 2d to Subpart ZZZZ

1. An initial notification is not required per 40 CFR 63.6645(a)(5).
2. A report may be required for failure to perform the work practice requirements on the schedule required in Table 2d. (See Footnote 2 of Table 2d for more information.)

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: GASTK

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
GASTK	Gasoline Storage Tank	Gasoline	500 gallons	NA

Applicable Requirements

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

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

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

Operational Limits & Requirements

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

NESHAP:

The tank is subject to 40 CFR 63 Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities. According to 40 CFR 63.11111(d) this storage tank, located at an area source, is an existing storage tank as it was constructed prior to November 9, 2006.

§63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You must keep applicable records as specified in §63.11125(d).

§63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

- (1) Minimize gasoline spills;
- (2) Clean up spills as expeditiously as practicable;
- (3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

- (4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.
- (b) You are not required to submit notifications or reports as specified in §63.11125, §63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.
- (c) You must comply with the requirements of this subpart by the applicable dates specified in §63.11113.
- (d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

§63.11125 What are my recordkeeping requirements?

- (d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.
 - (1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
 - (2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

Authority for Requirement: 46 CFR 63 Subpart CCCCCC
567 IAC 23.1(4)"ec"

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

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

G1. Duty to Comply

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

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source's right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air Permits, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

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

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

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

G6. Annual Fee

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

7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

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

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

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

G8. Duty to Provide Information

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

G9. General Maintenance and Repair Duties

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

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

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
 - a. The date, place and time of sampling or measurements
 - b. The date the analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses; and
 - f. The operating conditions as existing at the time of sampling or measurement.
 - g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance

records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

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

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

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

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

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

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

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

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

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

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

G13. Hazardous Release

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

G14. Excess Emissions and Excess Emissions Reporting Requirements

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

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

2. Excess Emissions Reporting

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

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

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

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

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

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice fulfills the requirement of paragraph 22.108(5)"b." – See G15. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or upset provision contained in any applicable requirement. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

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

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

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

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

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act (revisions affecting Title IV permitting are addressed in rules 567—22.140(455B) through 567 - 22.144(455B));
- e. The changes comply with all applicable requirements.
- f. For each such change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
 - i. A brief description of the change within the permitted facility,
 - ii. The date on which the change will occur,
 - iii. Any change in emission as a result of that change,
 - iv. The pollutants emitted subject to the emissions trade
 - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
 - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
 - vii. Any permit term or condition no longer applicable as a result of the change.

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*

5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

- a. An administrative permit amendment is a permit revision that does any of the following:

- i. Correct typographical errors
 - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
 - iii. Require more frequent monitoring or reporting by the permittee; or
 - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
 - b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
 - c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.
2. Minor Title V Permit Modification.
- a. Minor Title V permit modification procedures may be used only for those permit modifications that satisfy all of the following:
 - i. Do not violate any applicable requirement;
 - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit;
 - iii. Do not require or change a case by case determination of an emission limitation or other standard, or an increment analysis;
 - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act;
 - v. Are not modifications under any provision of Title I of the Act; and
 - vi. Are not required to be processed as significant modification under rule 567 - 22.113(455B).
 - b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
 - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
 - ii. The permittee's suggested draft permit;
 - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
 - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
 - c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a"

to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

3. Significant Title V Permit Modification.

Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, as those requirements that apply to Title V issuance and renewal.

The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.111-567 IAC 22.113*

G19. Duty to Obtain Construction Permits

Unless exempted in 567 IAC 22.1(2) or to meet the parameters established in 567 IAC 22.1(1)"c", the permittee shall not construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, or conditional permit, or permit pursuant to rule 567 IAC 22.8, or permits required pursuant to rules 567 IAC 22.4, 567 IAC 22.5, 567 IAC 31.3, and 567 IAC 33.3 as required in 567 IAC 22.1(1). A permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon. *567 IAC 22.1(1)*

G20. Asbestos

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

G21. Open Burning

The permittee is prohibited from conducting open burning, except as provided in 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

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

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

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

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

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as

practicable, but not later than 18 months after the promulgation of such standards and regulations.

- a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.
 - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
- a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
 - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
 - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
 - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
 - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*
5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:
 - a. Such applicable requirements are included and are specifically identified in the permit;
or
 - b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

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

G26. Severability

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

G27. Property Rights

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

G28. Transferability

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

G29. Disclaimer

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

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

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. If the owner or operator does not provide timely notice to the department, the department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with applicable rules or permit conditions. Upon written request, the department may allow a notification period of less than 30 days. At the department's request, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance demonstration. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically

altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

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

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 725-9545

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

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

G31. Prevention of Air Pollution Emergency Episodes

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

567 IAC 26.1(1)

G32. Contacts List

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

Chief of Air Permits
U.S. EPA Region 7
Air Permits and Compliance Branch
11201 Renner Blvd.
Lenexa, KS 66219
(913) 551-7020

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

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 725-9500

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

Field Office 1

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

Field Office 3

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

Field Office 5

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

Polk County Public Works Dept.

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

Field Office 2

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

Field Office 4

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

Field Office 6

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

Linn County Public Health

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

V. Appendix A: DNR Project #00-235



File Name _____

Senders Initials _____

STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR
SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

February 4, 2002

70001670 001181740845
CERTIFIED MAIL

Shelly Heston
Climax Molybdenum Company
PO Box 220
Ft. Madison, IA 52627

Re: Plant Number 56-02-021, Project Number 00-235, Permit amendment not required.

Dear Ms Heston:

The Department recently received a letter from Climax Molybdenum dated January 17, 2002 concerning the necessity of a permit amendment to permit 95-A-273-S1. Per a May 18, 2000 meeting, the Department felt permit 95-A-273-S1 needed to be amended for the following reasons:

- 1) The Department did not originally review the emergency stack and therefore felt some mention of this stack needed to be placed in the permit.
- 2) In the original review the Department was not aware of the use of elemental sulfur in the process. The Department felt a limit was required in order to keep the unit from being subject to NSPS Subpart H.

In regards to the first issue, a permit modification is not necessary per Project Number 97-132. As is discussed in correspondence during this project, Climax Molybdenum made an agreement with the Department in which a permit amendment is not required as long as the emergency stack is used less than five (5) times per year. Please note that this requirement with the necessary recordkeeping will be placed in Climax Molybdenums Title V permit. If you have any questions concerning this program please contact Jason Marcel at (515) 242-5014.

Recently the Department received a December 27, 2001 letter from EPA Region VII concerning Subpart H applicability. In that letter EPA determined the acid plant is a control device. Therefore, there is no need of a limit on the amount of elemental sulfur used.

Since the Department's reasons for a permit modification have been resolved, the Department has determined permit 95-A-273-S1 is not required to be amended at this time. If you have any questions feel free to call me at (515) 242-6002 or email me at chris.roling@dnr.state.ia.us.

Sincerely,

Christopher A. Roling, PE
Environmental Engineer Senior
Air Quality Bureau, IDNR

C: Anne Preziosi, IDNR
Jason Marcel, IDNR
Field Office 6

Appendix B: CAM Plans

Baghouse CAM Plan

Emission Points ST6, ST7, ST8, ST10, ST11, ST13, ST14, ST15, ST16, ST18, ST19, ST23, ST24, ST25, ST32, & ST61

Monitoring Approach

A. Indicator

ST6, ST7, ST8, ST10, ST11, ST13, ST14, ST15, ST16, ST23, ST24, ST25, ST32, & ST61

Daily visible emission readings and weekly pressure drop checks will be used as indicators.

ST18 & ST19

Visible emissions readings once during each transfer operation will be used as indicators.

B. Measurement Approach

ST6, ST7, ST8, ST10, ST11, ST13, ST14, ST15, ST16, ST18, ST19, ST23, ST24, ST25, ST32, & ST61

A trained employee familiar with normal process operations and the appearance of the exhaust from each source is responsible for observing and reading visible emissions at the specified frequency.

The pressure drop of each baghouse (except ST18 & ST19) will be checked weekly to ensure that the pressure drop does not fall outside of the normal operating range.

C. Indicator Range

The presence of and visible emissions would be considered an excursion and trigger the operator to take corrective actions

The facility shall keep records of the normal operating pressure drop range based on manufacturer's information, recent performance tests, and engineering analysis.

Where a pressure drop range is specified in the Emission Point Specific Conditions section of this permit, this pressure drop range shall be used as the normal operating pressure drop range.

Pressure drop should not fall outside of the normal operating range.

D. QIP (Quality Improvement Plan) Threshold

The QIP threshold is six excursions in a six month reporting period

E. Performance criteria

Data representativeness:

Pressure drop outside of the Indicator Range would indicate a decrease in the performance of the baghouse and potentially indicate an increase of particulate emissions.

The presence of any visible emissions from a properly maintained and operating baghouse is an appropriate indicator that a bag rupture or leak is occurring and that corrective action is necessary.

QA/QC practices and criteria:

The facility shall check the pressure drop weekly when the emission unit on this emission point is in operation. If a pressure drop outside the Indicator Range is observed, corrective action will be taken within 8 hours.

Employees performing visible emissions observations are trained on observing the source under the appropriate conditions (e.g. lighting, sun position, etc.) and have a detailed understanding of the proper operation of the affected sources. The records of the emissions observations are periodically reviewed by the facility environmental coordinator to verify that the notations are being kept properly.

Monitoring frequency and
Data collection procedure:

The Weekly Baghouse Inspection Log is maintained electronically in an Operations Excel spreadsheet. The contents of the spreadsheet include control device number, the stack number, differential pressure, and record of any visible emissions. Records of pressure drop readings and visible emission readings will be maintained for five years.

CAM Plan for CD13 Sulfuric Acid Plant

Emission Point ST20

Monitoring Approach

A. Indicator

#2 Absorption Tower Inlet Acid Temperature – minimum 165 degrees Fahrenheit and maximum 195 degrees Fahrenheit.

#2 Absorption Tower Acid Strength – 98.2% to 98.7%

B. Calibration

Calibrations are performed in house by maintenance staff.

C. Record keeping & Reporting

Daily Emission System Log maintained electronically in PI System (record temperature, differential pressure, and acid strength readings four (4) times per hour and hourly average).

D. If hourly averages are outside of range

Immediately investigate to find the reason for the excursion. Corrective action will be taken within 8 hours to return to the normal operating range.

E. Performance Criteria

Verification of operational status: Records of #2 Absorption Tower Inlet Acid Temperature and #2 Absorption Tower Acid Strength will be maintained for five years.

QA/QC practices and criteria: The facility shall check the #2 Absorption Tower Inlet Acid Temperature and #2 Absorption Tower Acid Strength four (4) times per hour averaged hourly when the emission unit on this emission point is in operation.

Monitoring frequency and data

Collection procedure: Records of the readings shall be maintained for five years.

CAM Plan for CD15 Electrostatic Precipitator (ESP)

Emission Point ST25

I. Background

The MoS₂ precipitator is a unique in that it was specifically designed for Climax. This precipitator does not accumulate dust so there is no dust buildup and no plate alignment either. It has a single wire centered in a tube. This unit does not have a hopper because the oil drops down into drums mounted at the bottom of the tubes. Instead of a penthouse, there are compartments that house the high voltage insulators. There are no rappers associated with this unit.

A. Emission Unit

Description: Emission Point ST25: Moly sulfide (MoS₂) Kiln
Identification: Emission Unit: W3
Control Equipment: CD15 (Electrostatic Precipitator)
Control Equipment Manufacturer: Bilirck Inc.
Control Equipment Installation Date: May 1994
Facility: Climax Molybdenum Company
Plant Number 56-02-021

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No: Iowa DNR Construction Permit 94-A-001-S3
567 IAC 23.3(2)"a", 567 IAC 23.3(2)"d"
Emission Limit or Standard: 0.1 gr/scf PM; 0.38 lb/hr PM10; 40% opacity

C. Equipment

The equipment is located at the Moly sulfide plant. It is an electrostatic precipitator which removes particulate from the gas stream after the baghouse.

II. Monitoring Approach

A. General Monitoring Guidelines

1. CAM involves the observation of control equipment compliance indicators: voltage and amperage to the precipitator. This plan defines acceptable ranges for these indicators. CAM also includes monitoring and control equipment maintenance and inspections. Maintenance and inspections that will facilitate consistent monitoring and control equipment operations are identified in this plan.
2. Voltage and amperage monitoring is not required during periods of time greater than one day in which the source does not operate.

B. Compliance Indicator Ranges

An excursion is defined as:

1. Opacity: greater than 0%, with the exception of start-up, shutdown and cleaning.
2. Primary voltage at or below 20V for greater than two hours
3. Primary amperage at or above 20 Amps for greater than two hours

C. Excursion from Compliance Indicators

1. An excursion occurs when an observed compliance indicator is outside of its defined acceptable indicator range. An excursion does not necessarily indicate a violation of applicable permit terms, conditions, and/or requirements. However, an excursion is a deviation that must be reported in the Semi-Annual Monitoring Report and Annual Compliance Certification Report.
2. Corrective actions will begin as soon as possible, but no later than eight hours from the observation of the excursion. Abnormal conditions discovered through equipment inspection and maintenance requires implementation of remediation within a reasonable timeframe.
3. Opacity shall be observed on a weekly basis to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed, corrective actions will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective actions do not return the compliance indicator to its defined acceptable indicator range, then a Method 9 observation will be required. If weather conditions prevent the observer from conducting an opacity observation, the observer will note such conditions on the data observation sheet. At least three attempts will be made to retake the opacity readings at approximately 2-hr intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.
4. Report monitoring or other deviations (operating conditions, emission limits, or reporting requirements) in IDNR Semi-annual Monitoring and Annual Compliance Certification reports.

D. Measurement Approach

1. Opacity shall be observed using EPA Method 22.
2. Primary voltage and amperage will be measured and displayed on visual readouts and recorded electronically on the facility's PI system.

III. **Quality Improvement Plan**

A Quality Improvement Plan (QIP) will be required to submit to the IDNR if an accumulation of excursions of either the opacity indicator or the power indicator exceeds 5 percent of the ESP's normal operating time for a 6-month reporting period. All the requirements in 40 CFR 64.8(b) shall be fulfilled if a QIP plan is required.

IV. **Quality Assurance/Quality Control**

A. Monitoring Methods

Daily

Check the control on PI system.

Weekly

Opacity readings.

Monthly

1. Remove and clean the wires and weights.
2. Clean the compartments that house the high voltage insulators.
3. Check fluid level of the Transformer-Rectifier (TR) set.

B. Audible ESP Malfunction Alarm

An audible alarm from SQ300 will alarm when the following conditions occur:

1. Primary over current alarm is 20 Amps
2. Primary under voltage alarm is 20 Volts
3. Secondary over current alarm is 75 MA
4. Secondary under voltage alarm is 15 KV

Corrective actions will be implemented upon the occurrence of a malfunction alarm.

C. Data Collection Procedures

Operators record monitoring readings and observations weekly on a data log.

D. Record Keeping and Reporting (Verification of Operational Status)

1. The voltages and amps are displayed on the main control panel for the ESP and on the facility's PI system. Voltage or amperage readings outside of recent normal operating ranges could indicate a decrease in the performance of the ESP and potentially an increase in particulate emissions.
2. Opacity reports and supporting data will be kept for five years.
3. Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five years.
4. All excursions will be reported in semi-annual monitoring reports and annual compliance certifications.

CAM Plan for CD39 Electrostatic Precipitator (ESP)

Emission Point ST25

I. Background

The MoS₂ precipitator is unique in that it was specifically designed for Climax. This precipitator does not accumulate dust so there is no dust buildup and no plate alignment either. It has a single wire centered in a tube. This unit does not have a hopper because the oil drops down into drums mounted at the bottom of the tubes. Instead of a penthouse, there are compartments that house the high voltage insulators. There are no rappers associated with this unit.

A. Emission Unit

Description: Emission Point ST25: Moly sulfide (MoS₂) Kiln
Identification: Emission Unit: W3
Control Equipment: CD39 (Electrostatic Precipitator)
Control Equipment Manufacturer: GE
Control Equipment Installation Date: July 2008
Facility: Climax Molybdenum Company
Plant Number 56-02-021

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No: Iowa DNR Construction Permit 94-A-001-S3
567 IAC 23.3(2)"a", 567 IAC 23.3(2)"d"
Emission Limit or Standard: 0.1 gr/scf PM; 0.38 lb/hr PM10; 40% opacity

C. Equipment

The equipment is located at the Moly sulfide plant. It is an electrostatic precipitator which removes particulate from the gas stream after the baghouse.

II. Monitoring Approach

A. General Monitoring Guidelines

1. CAM involves the observation of control equipment compliance indicators: voltage and amperage to the precipitator. This plan defines acceptable ranges for these indicators. CAM also includes monitoring and control equipment maintenance and inspections. Maintenance and inspections that will facilitate consistent monitoring and control equipment operations are identified in this plan.
2. Voltage and amperage monitoring is not required during periods of time greater than one day in which the source does not operate.

B. Compliance Indicator Ranges

An excursion is defined as:

1. Opacity: greater than 0%, with the exception of start-up, shutdown and cleaning.
2. Primary voltage at or below 20V for greater than two hours
3. Primary amperage at or above 20 Amps for greater than two hours

C. Excursion from Compliance Indicators

1. An excursion occurs when an observed compliance indicator is outside of its defined acceptable indicator range. An excursion does not necessarily indicate a violation of applicable permit terms, conditions, and/or requirements. However, an excursion is a deviation that must be reported in the Semi-Annual Monitoring Report and Annual Compliance Certification Report.
2. Corrective actions will begin as soon as possible, but no later than eight hours from the observation of the excursion. Abnormal conditions discovered through equipment inspection and maintenance requires implementation of remediation within a reasonable timeframe.
3. Opacity shall be observed on a weekly basis to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed, corrective actions will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective actions do not return the compliance indicator to its defined acceptable indicator range, then a Method 9 observation will be required. If weather conditions prevent the observer from conducting an opacity observation, the observer will note such conditions on the data observation sheet. At least three attempts will be made to retake the opacity readings at approximately 2-hr intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.
4. Report monitoring or other deviations (operating conditions, emission limits, or reporting requirements) in IDNR Semi-annual Monitoring and Annual Compliance Certification reports.

D. Measurement Approach

1. Opacity shall be observed using EPA Method 22.
2. Primary voltage and amperage will be measured and displayed on visual readouts and recorded electronically on the facility's PI system.

III. **Quality Improvement Plan**

A Quality Improvement Plan (QIP) will be required to submit to the IDNR if an accumulation of excursions of either the opacity indicator or the power indicator exceeds 5 percent of the ESP's normal operating time for a 6-month reporting period. All the requirements in 40 CFR 64.8(b) shall be fulfilled if a QIP plan is required.

IV. **Quality Assurance/Quality Control**

A. Monitoring Methods

Daily

Check the control on PI system.

Weekly

Opacity readings.

Monthly

1. Remove and clean the wires and weights.
2. Clean the compartments that house the high voltage insulators.
3. Check fluid level of the Transformer-Rectifier (TR) set.

B. Audible ESP Malfunction Alarm

An audible alarm from SQ300 will alarm when the following conditions occur:

1. Primary over current alarm is 20 Amps
2. Primary under voltage alarm is 20 Volts
3. Secondary over current alarm is 75 MA
4. Secondary under voltage alarm is 15 KV

Corrective actions will be implemented upon the occurrence of a malfunction alarm.

C. Data Collection Procedures

Operators record monitoring readings and observations weekly on a data log.

D. Record Keeping and Reporting (Verification of Operational Status)

1. The voltages and amps are displayed on the main control panel for the ESP and on the facility's PI system. Voltage or amperage readings outside of recent normal operating ranges could indicate a decrease in the performance of the ESP and potentially an increase in particulate emissions.
2. Opacity reports and supporting data will be kept for five years.
3. Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five years.
4. All excursions will be reported in semi-annual monitoring reports and annual compliance certifications.

CAM Plan for CD17 Scrubber

Emission Point ST25

Monitoring Approach

A. Indicator

pH \geq 6 (1 hour average)

B. Calibration

Calibration of the pH monitor is completed on a monthly basis

C. Record Keeping & Reporting

The highest 1 hour average pH reading in a 24-hour period shall be recorded electronically in the PI system.

Preventative maintenance and required maintenance, including gauge calibration are initiated through maintenance work order system (Ellipse).

A. If indicators being monitored are outside of their range

Immediately investigate to find the reason for the excursion. Corrective action will be taken within 8 hours to return the point that was out of normal range to normal.

Evaluate the situation for remedies.

Take necessary action to return the item to its indicator range.

The QIP threshold is six excursions in a six month reporting period