

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

**Name of Permitted Facility:** Keokuk Mills, LLC

**Facility Location:** 240 Royal Road & 3972 Main Street  
Keokuk, IA 52632

**Air Quality Operating Permit Number:** 04-TV-012R2-M001

**Expiration Date:** July 24, 2021

**Permit Renewal Application Deadline:** January 24, 2021

**EIQ Number:** 92-3000

**Facility File Number:** 56-01-025

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**Responsible Official**

Allan See

Project Manager

3972 Main Street

Keokuk, IA 52632

Phone #: 660-341-5661

**Permit Contact Person for the Facility**

Allan See

Project Manager

3972 Main Street

Keokuk, IA 52632

Phone #: 660-341-5661

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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**



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Lori Hanson, Supervisor of Air Operating Permits Section

9/12/2017

Date

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## Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
CE .....	control equipment
CEM.....	continuous emission monitor
°F .....	degrees Fahrenheit
EIQ.....	emissions inventory questionnaire
EP.....	emission point
EU .....	emission unit
gr./dscf .....	grains per dry standard cubic foot
gr./100 cf.....	grains per one hundred cubic feet
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
MVAC.....	motor vehicle air conditioner
NAICS.....	North American Industry Classification System
NSPS .....	new source performance standard
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)
PM <sub>10</sub> .....	Particulate Matter (PM) ten microns and less in diameter
SO <sub>2</sub> .....	sulfur dioxide
NO <sub>x</sub> .....	nitrogen oxides
VOC.....	volatile organic compound
CO.....	carbon monoxide
HAP.....	hazardous air pollutant
HCN.....	hydrogen cyanide

# I. Facility Description and Equipment List

Facility Name: Keokuk Mills, LLC  
 Permit Number: 04-TV-012R2-M001

Facility Description: Steel Foundries (except Investment), (SIC 3325), (NAICS 331513)

## Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
01	01	New Sand Tank	76-A-100
02	02	Thermal Sand Reclaim System	09-A-188
03	11	Palmer Sand Conditioner	77-A-176-S8
	30a	Reclaim Sand Day Tank	
05	05	Demmler Core Machine	96-A-695-S1
	06	Small Blower Core Machine	
	08	Redford CB22 Core Machine	
	09	Redford CB22 Core Machine	
	10	Redford CB26 Core Machine	
9B	17	Electric Arc Furnace	06-A-449-S4
10	14a	Mold Making	08-A-329-S4
	14b	Mold Making	
	14d	Mold Making	
	21	Pouring & Cooling	
	23	Large Casting Shakeout	
	26	Burn Rail	
11FUG	36	Special Products Grinding	Internally Vented
37i	37n1, 37n2, 37s3, and 37s4	Four (4) GMAW Casting Repair Welders	04-A-1101-S2
12	27	200 Blow System	76-A-098-S8
	28	GIW East	
	35	Turntable Blast	
15	25	Tumbler (34 cu ft)	76-A-099-S2
17	31	5 Kwic Arc Booths	01-A-181-S6
18-1	32A	Casting Heat Treat (Oven #6511)	01-A-219-S3
18-2	32B	Casting Heat Treat (Oven #6512)	01-A-220-S4
18-3	32C	Casting Heat Treat (Oven #6513)	01-A-221-S3
18-4	32C	Casting Heat Treat (Oven #6513)	01-A-222-S3

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
18-5	32D	Casting Heat Treat (Oven #6514)	01-A-223-S3
18-6	32D	Casting Heat Treat (Oven #6514)	01-A-224-S3
18-7	32E	Casting Heat Treat (Oven #6515)	01-A-225-S4
19	33	Walk-in Blast	01-A-182-S4
25i	25-1N-A	Casting Welding / Weld Repair	01-A-227-S2
	25-1N-B	Carbon Rod Welding	
	25-2N-A	Casting Welding / Weld Repair	
	25-2N-B	Carbon Rod Welding	
	25-3N-A	Casting Welding / Weld Repair	
	25-3N-B	Carbon Rod Welding	
	25-4N-A	Casting Welding / Weld Repair	
	25-4N-B	Carbon Rod Welding	
	25-5N-A	Casting Welding / Weld Repair	
	25-5N-B	Carbon Rod Welding	
	25-6N-A	Casting Welding / Weld Repair	
	25-6N-B	Carbon Rod Welding	
	25-1S-A	Casting Welding / Weld Repair	
	25-1S-B	Carbon Rod Welding	
	25-2S-A	Casting Welding / Weld Repair	
	25-2S-B	Carbon Rod Welding	
	25-4S-A	Casting Welding / Weld Repair	
	25-4S-B	Carbon Rod Welding	
	25-5S-A	Casting Welding / Weld Repair	
	25-5S-B	Carbon Rod Welding	
25-6S-A	Casting Welding / Weld Repair		
25-6S-B	Carbon Rod Welding		
26	49	Walk-in Blast	09-A-757
27 FUG	67	Large Mold Casting Cooling	Internally Vented
29	39	Core Spray Booth	98-A-366-S3

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
30b	30b	300 System Reclaim Sand Tank	15-A-522
33	21	Pouring & Cooling	97-A-659-S6
	63	Induction Furnace	
34	48	New Sand 150 Day Tank	97-A-664-S2
SCC01	SCC01	Tumble Blast (70 cu ft.)	02-A-656-S4
B2	SCC Boiler	Boiler	01-A-233-S2
08 FUG & 57 FUG	16a and 16b	Scrap & Charge Handling, Scrap & Charge Unloading	Internally Vented
24 FUG	45	Casting Grinding	
	47	Casting Salvage	
51	17	Electric Arc Furnace	06-A-450-S4
52i	22	Small Shakeout	11-A-285-S1
	28	GIW East	
	29	GIW West	
53i	03	Sand Heater	15-A-524
54i	04	Sand Heater	15-A-525
56	15	Core Per-Mix	15-A-523
58i	07a and 07b	Two (2) Mold Mixers	15-A-526
59i	20	Ladle Preheat	15-A-527
106	106	Emergency Diesel Engine— Sprinkler System Pump	N/A

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**Insignificant Equipment List**

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<b>Insignificant Emission Unit Number</b>	<b>Insignificant Emission Unit Description</b>
EU02	Bag Dumping Fugitives
EU12	Shell Core
EU13	Shell Core
EU18	Induction Furnace
EU19	Induction Furnace
EU38A	Resin Bulk Storage Tanks
EU38B	Resin Bulk Storage Tanks
EU43	Hawkeye Heating
EU53	Haul Road
EU 60	Diesel Oil Tank (500 gallons)
EU61	Isopropyl Alcohol Tanks (2x250 gallons)
EU62	Safety Kleen Parts Washers (35 gallons)
EU64	Kerosene Tank
EU65	Gasoline Tank
EU68	#7 Kwic Arc Booth
EU69	#8 Kwic Arc Booth
EU-70	Pattern Shop Dust Collector (SUE)
EU-71	Isocure Tank – Part I Resin (587 gal.)
EU-72	Isocure Tank – Part II Resin (587 gal.)
EU-73	Per-Mix Tank – Part I Resin (587 gal.)
EU-74	Per-Mix Tank – Part II Resin (587 gal.)
EU-75	Per-Mix Tank – Catalyst (1315 gal.)
EU-76	Dash 1&2 Tank – Part I Resin (1315 gal.)
EU-77	Dash 1&2 Tank – Part II Resin (1315 gal.)
EU-77	Dash 1&2 Tank – Catalyst (1315 gal.)
EU78	90 Ton Sand Tank
EU79	Wheelabrator 76 Blast System
EU-81	Furnace Cooling Tower
EU-82	Heat Treat Oven Cooling Tower
EU-83	Palmer Cooling Tower
EU101	Stone Car Bottom Heat Treat Oven
EU102	#6 Ladle Preheat
EU103	Special Products Welding
EU104	Small Finish Shop Dust Collector
EU105	Viking Blast Dust Collector

<b>Insignificant Emission Unit Number</b>	<b>Insignificant Emission Unit Description</b>
EU107	Garnet Blast
EU108	West Heat Treat Oven Cooling Tower
EU109	Torpedo Heaters
EU110	Propylene Storage Tanks (4 x 1,000 gallons)
EU111	Denray Downdraft Table
EU112	Palmer Boiler

## II. Plant-Wide Conditions

Facility Name: Keokuk Mills, LLC  
Permit Number: 04-TV-012R2-M001

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

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### Permit Duration

The term of this permit is: five (5) years  
Commencing on: July 25, 2016  
Ending on: July 24, 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.

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### Emission Limits

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

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

Sulfur Dioxide (SO<sub>2</sub>): 500 parts per million by volume  
Authority for Requirement: 567 IAC 23.3(3)"e"

### Particulate Matter (PM)

No person shall cause or allow the emission of Particulate Matter (PM) 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 (PM) 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 (PM) 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 - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent Particulate Matter (PM) in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. 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 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 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, fertilizers 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.

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

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### **NESHAP Applicability**

Keokuk Mills, LLC is subject to 40 CFR 63 Subpart A – NESHAP General Provisions.

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

Keokuk Mills, LLC is subject to all applicable requirements of 40 CFR 63 Subpart EEEEE National Emission Standards for Iron and Steel Foundries.

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

Keokuk Mills, LLC is subject to 40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

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

Keokuk Mills, LLC is subject to 40 CFR 63, Subpart DDDDD— National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

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

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### **Stack Testing Requirements**

If the facility, Keokuk Mills, LLC, is operational, stack testing must be completed as required. If the facility is in a period of non-operation (shut-down) and has notified the DNR in writing of the shut-down, stack testing is not required during the period of non-operation. If the facility becomes operational for any period of time and a stack testing deadline has passed, stack testing must be conducted within 90-days of becoming operational.

### III. Emission Point-Specific Conditions

Facility Name: Keokuk Mills, LLC  
Permit Number: 04-TV-012R2-M001

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#### Emission Point ID Number: 01

##### Associated Equipment

Associated Emission Unit ID Numbers: 01  
Emissions Control Equipment ID Number: CE-01  
Emissions Control Equipment Description: Cartridge Filter

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Emission Unit vented through this Emission Point: 01  
Emission Unit Description: New Sand Tank  
Raw Material/Fuel: Silica Sand  
Rated Capacity: 25 tons/hr

#### Applicable Requirements

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

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

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

Pollutant: Particulate Matter (PM)  
Emission Limit(s): 35.4 lb/hr<sup>(1)</sup>  
<sup>(1)</sup> Based on a process weight rate of 25 tons/hr  
Authority for Requirement: 567 IAC 23.3(2)"a"  
DNR Construction Permit 76-A-100

##### Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes  No

Facility Maintained Operation & Maintenance Plan Required? Yes  No

Compliance Assurance Monitoring (CAM) Plan Required? Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## **Cartridge Filter System Agency Operation and Maintenance Plan**

### **Monitoring Guidelines**

The facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation, and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time, or the presence of a monitored abnormal condition. An excursion does not necessarily indicate a violation of an applicable requirement.

If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the excursion to the department and conduct source testing within 90 days of the excursion to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits, new indicator ranges must be set for monitoring, and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, the facility must submit a compliance schedule to the department within 60 days of obtaining test results. This schedule should outline the corrective action planned by the facility, and also include a plan to demonstrate compliance once corrective measures have been completed.

#### **General**

- Periodic Monitoring is not required during periods of time greater than one day in which the source does not operate.

#### **Weekly**

- Visible emissions shall be observed on a weekly basis to ensure no visible emissions during the material handling operation of the unit. If visible emissions are observed this would be an exceedance not a violation and action will be taken as soon as possible, but no later than eight hours. If weather conditions prevent the observer from conducting an observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake readings at approximately two-hour intervals throughout the day. If unsuccessful that day due to weather, an observation shall be made the following day the unit operates.

Maintain a written record of the observation and any action resulting from the observation.

#### **Monthly**

- Check the cleaning sequence of the cartridge filter system.
- Pulse jet baghouse - check the air delivery system
- Check the hopper functions and performance.
- If leaks or abnormal conditions are detected, the appropriate measures for remediation will be implemented within eight hours.

Maintain a written record of the inspection and any action resulting from the inspection.

### **Quarterly**

- Thoroughly inspect cartridge filters for leaks and wear. (Look for obvious holes or tears in the cartridge filters.)
- If leaks or abnormal conditions are detected, the appropriate measures for remediation will be implemented within eight hours. Cartridge filter replacement should be documented by identifying the date, time and location of the cartridge filter in relationship to the other cartridge filters. The location should be identified on an overhead drawing of the cartridge filter layout in the cartridge filter system.

Maintain a written record of the inspection and any action resulting from the inspection.

### **Semiannual**

- Every six months, inspect all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods.
- If leaks or abnormal conditions are detected the appropriate measures for remediation will be implemented within eight hours.

Maintain a written record of the inspection and any action resulting from the inspection.

### **Record Keeping and Reporting**

Maintenance and inspection records will be kept for five years and be available upon request.

### **Quality Control**

- The filter equipment will be operated and maintained according to the manufacturer's recommendations.
- An adequate inventory of spare parts shall be kept.

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 02**

### Associated Equipment

Associated Emission Unit ID Numbers: 02  
Emissions Control Equipment ID Number: CE-04  
Emissions Control Equipment Description: Baghouse #11

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Emission Unit vented through this Emission Point: 02  
Emission Unit Description: Thermal Sand Reclaim System  
Raw Material/Fuel: Silica Sand  
Rated Capacity: 6 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

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

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 09-A-188

Pollutant: PM<sub>10</sub>

Emission Limit(s): 2.4 lb/hr

Authority for Requirement: DNR Construction Permit 09-A-188

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf, 5.57 lb/hr

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 09-A-188

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"  
DNR Construction Permit 09-A-188

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)

Emission Limit(s): 7.62 lb/hr

Authority for Requirement: DNR Construction Permit 09-A-188

Pollutant: Volatile Organic Compounds (VOC)  
Emission Limit(s): 3.6 lb/hr  
Authority for Requirement: DNR Construction Permit 09-A-188

Pollutant: Carbon Monoxide (CO)  
Emission Limit(s): 22.7 lb/hr  
Authority for Requirement: DNR Construction Permit 09-A-188

**Operational Limits & Requirements**

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

**NESHAP:**

This facility is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries (40 CFR 63 Subpart EEEEE; 567 IAC 23.1(4)"de").

**Operating Limits:**

Operating limits for this emission unit shall be:

- A. The owner/operator shall install, maintain, and operate equipment to continuously monitor and record the temperature in the Thermal Sand Reclaim System. The temperature measurement device shall be in a location where the temperature readings are representative of the temperature in the portion of the Thermal Sand Reclaim System in the sand processing chamber.
- B. While the Thermal Sand Reclaim System is processing sand, the temperature measured in the Thermal Sand Reclaim System shall be maintained above the average temperature observed over the most recent compliance test which demonstrated compliance with the VOC emission limits listed above.
- C. The baghouse associated with the Thermal Sand Reclaim System shall be operated and maintained according to the manufacturer's specifications.

**Reporting and Recordkeeping:**

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

- A. Continuously record the temperature of the Thermal Sand Reclaim System.
- B. For each time the Thermal Sand Reclaim System starts or stops processing sand, record the date and time and whether sand processing was starting or ending.
- C. Maintain a copy of the baghouse manufacturer's recommendation for the operation and maintenance of the baghouse.
- D. Maintain a log of all inspection and maintenance activities that are undertaken on the

baghouse associated with this equipment. This log must include, but should not necessarily be limited to, the date and time the activity was undertaken as well as any issues noted or addressed during the activity.

Authority for Requirement: DNR Construction Permit 09-A-188

**Emission Point Characteristics**

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

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

Stack Opening, (inches, dia.): 42

Exhaust Flow Rate (scfm): 24,850

Exhaust Temperature (°F): 180

Discharge Style: Vertical, unobstructed

Authority for Requirement: DNR Construction Permit 09-A-188

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**CAM Plan for EP-02 Baghouse**

*This emission point shall conform to the conditions listed below.*

1. Background

A. Emission Unit: 02

Facility: Keokuk Mills, LLC

Description: Thermal Sand Reclaim System

Emission Point Identification Number: EP-02

Emission Unit Identification Numbers: EU-02

Control Device Identification Number: CE-04

B. Applicable Regulations, Emission Limits, and Monitoring Requirements:

Regulation No.: 567 IAC 23.3(2)"d"  
 567 IAC 23.4(6)  
 567 IAC 23.3(3)"e"  
 DNR Construction Permit 09-A-188

Opacity Emission Limit: 40%  
 PM<sub>10</sub> Emission Limit: 2.4 lb/hr  
 Particulate Emission Limit: 0.05 gr/dscf, 5.57 lb/hr  
 Current Monitoring Requirement: Daily pressure drop across baghouse  
 Weekly opacity

C. Control Technology:  
 Baghouse

2. Monitoring Approach

The key elements of the monitoring approach are presented in Table A. The selected performance indicators are baghouse differential pressure and visible emissions.

Table A—Monitoring Approach

Applicable Requirements	PM Limits	Opacity
General Monitoring Approach	Pressure drop readings	Visible emissions observations
Daily	Check baghouse differential pressure.	
Weekly		Visible emissions shall be observed on a weekly basis to ensure no visible emissions during the material handling operation of the unit. If visible emissions are observed this would be an exceedance not a violation and action will be taken as soon as possible, but no later than eight hours. If weather conditions prevent the observer from conducting an observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake readings at approximately two-hour intervals throughout the day. If unsuccessful that day due to weather, an observation shall be made the following day the unit operates.  Maintain a written record of the observation and any action resulting from the observation.

Quarterly	<p>Thoroughly inspect cartridge filters for leaks and wear. (Look for obvious holes or tears in the cartridge filters.)</p> <p>If leaks or abnormal conditions are detected, the appropriate measures for remediation will be implemented within eight hours. Cartridge filter replacement should be documented by identifying the date, time and location of the cartridge filter in relationship to the other cartridge filters. The location should be identified on an overhead drawing of the cartridge filter layout in the cartridge filter system.</p> <p>Maintain a written record of the inspection and any action resulting from the inspection.</p>	
Semi-annually	<p>Every six months, inspect all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods.</p> <p>If leaks or abnormal conditions are detected the appropriate measures for remediation will be implemented within eight hours.</p> <p>Maintain a written record of the inspection and any action resulting from the inspection.</p>	
Indicator Range/Source	Normal Operating Pressure Range: 2 – 8 inches H <sub>2</sub> O.	Presence of visible emissions.
Data Collection Frequency	<p>Daily: Pressure range observations.</p> <p>Quarterly and Semiannually: Equipment inspections.</p>	<p>Weekly: Visible emissions observations.</p> <p>Quarterly and Semiannually: Equipment inspections.</p>
Recordkeeping	<p>Daily logs of pressure readings.</p> <p>Weekly logs of emissions observations readings.</p> <p>All daily, monthly, quarterly, and semi-annually required inspections and maintenance. The date, time, and the location of maintenance or repair performed.</p> <p>All corrective actions resulting from compliance indicators and inspections and maintenance.</p> <p>Excursion, indicator opacity exceedance, and excess emissions reports.</p> <p>Manual log entries are made based on gauge readings and the observation (or not) of visible emissions.</p>	

	<p>Maintenance personnel record all maintenance/inspection performed on the baghouse and actions resulting from the inspection.</p> <p>Maintenance and inspection records will be kept for at least five (5) years and be available to the IDNR upon request.</p>
Quality Control	<p>The filter equipment will be operated and maintained according to the manufacturer's recommendations.</p> <p>An adequate inventory of spare parts shall be kept.</p> <p>Visible emissions observer trained per Method 22.</p>

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 03 (Sand Reclaim System)**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity (tons/hr)	CE ID & Description
03	11	Palmer Sand Conditioner	Sand	12.5	CE 02 Baghouse
	30a	Reclaim Sand Day Tank	Sand	20	

**Applicable Requirements**

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

*The emissions from this equipment shall not exceed the following specified levels.*

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 77-A-176-S8

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.20 lb/hr

Authority for Requirement: DNR Construction Permit 77-A-176-S8

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr./dscf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 77-A-176-S8

**Operational Limits & Requirements**

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (General Provisions; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

**Operating Limits**

Operating limits for this emission unit shall be:

- A. The baghouse (CE-02) shall be operated and maintained according to the manufacturer’s specifications.

Reporting & Record keeping:

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. A log of all maintenance and inspection activities performed on the baghouse (CE 02). This log shall include, but is not necessarily limited to:
  - The date and time any inspection and/or maintenance was performed on the baghouse (CE 02);
  - Any issues identified during the inspection;
  - Any issues addressed during the maintenance activities;
  - Identification of the staff member performing the maintenance or inspection.
- B. Per 40 CFR §63.7753, the owner or operator shall keep all records related to NESHAP Subpart EEEEE onsite for at least two (2) years after the date of each occurrence, measurement, maintenance, corrective action, report, and record.
- C. Per 40 §63.7745(b), the owner or operator shall keep all operation and maintenance plans required by NESHAP Subpart EEEEE for the life of the iron foundry or until the iron foundry is no longer subject to the requirements of NESHAP Subpart EEEEE.
- D. The owner or operator shall keep all records as required by 40 CFR §63.7744, 40 CFR §63.7745, and 40 CFR §63.7752.

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 77-A-176-S8

Emission Point Characteristics

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

Stack Height, (ft, from the ground): 42.4

Stack Opening, (inches, dia.): 24

Exhaust Flow Rate (scfm): 1,900

Exhaust Temperature (°F): 90

Discharge Style: Unobstructed vertical

Authority for Requirement: DNR Construction Permit 77-A-176-S8

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

**Monitoring Requirements**

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

**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 this 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: 05**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity (tons/hr) <sup>(1)</sup>	CE ID & Description
05	05	Demmler Core Machine	Sand/Resin	4.5 Sand	CE-14: DES-68 Scrubber
	06	Small Blower Core Machine	Sand/Resin	4.5 Sand	
	08	Redford CB22 Core Machine	Sand/Resin	12 Sand	
	09	Redford CB22 Core Machine	Sand/Resin	12 Sand	
	10	Redford CB26 Core Machine	Sand/Resin	12 Sand	

<sup>(1)</sup>The maximum amount of resin used in the core machines covered by construction permit 96-A-695-S1 shall not exceed 4600 tons per twelve-month rolling period.

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of 0% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 96-A-695-S1

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.31 lb/hr

Authority for Requirement: DNR Construction Permit 96-A-695-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 96-A-695-S1

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 2.97 lb/hr

Authority for Requirement: DNR Construction Permit 96-A-695-S1

### **Operational Limits & Requirements**

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

#### **NESHAP:**

The emission units are of the source type subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries – Subpart EEEEE; however, the facility does not utilize triethylamine (TEA) in the core making process. Therefore, it is not subject to the requirements of this subpart [40 CFR 63.7690(a)(11)]. Should the facility use TEA in the core making line it shall be subject to the requirements of the subpart.

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 96-A-695-S1

#### **Operating Limits:**

Operating limits for this emission unit shall be:

- A. The maximum amount of resin used in the core machines covered by this permit (Permit 96-A-695-S1) shall not exceed 4600 tons per twelve-month rolling period.
- B. The resin used in the core machines shall not contain triethylamine (TEA).

#### **Reporting Record keeping:**

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

- A. The permittee shall calculate and record the monthly total and the 12-month rolling total amount of resin used in the core machines, in applicable units.
- B. The permittee shall record the VOC, Individual HAP and Total HAP content of any resin used in the core machines, in applicable units.
- C. The permittee shall maintain manufacturer/vendor provided information (i.e., Material Safety Data Sheets (MSDS), technical data sheets, etc.) of all materials used at the facility, which clearly indicates the VOC and HAP content of that material.

Authority for Requirement: DNR Construction Permit 96-A-695-S1

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 42  
Stack Opening, (inches, dia.): 22 x 32  
Exhaust Flow Rate (scfm): 4,350  
Exhaust Temperature (°F): 72  
Discharge Style: Vertical Unobstructed  
Authority for Requirement: DNR Construction Permit 96-A-695-S1

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

**Monitoring Requirements**

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

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

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

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

**Agency Operation and Maintenance Plan for CE-14 Scrubber**

Facility: Keokuk Mills, LLC  
Description: Demmler Core Machine, Small Blower Core Machine, Redford CB22 Core Machine, Redford CB22 Core Machine, & Redford CB26 Core Machine  
Emission Point Identification Number: EP-05  
Emission Unit Identification Numbers: EU-05, EU-06, EU-08, EU-09 & EU-10  
Control Device Identification Number: CE-14

**Monitoring Guidelines**

The facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time, or the presence of a monitored abnormal condition. An excursion does not necessarily indicate a violation of an applicable requirement. If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the excursion to the department and conduct source testing within 90 days of the excursion to demonstrate compliance with applicable requirements. If the test demonstrates compliance with

emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

### **Monitoring Methods & Corrective Actions**

#### **General**

- Periodic Monitoring is not required during periods of time greater than one day in which the source does not operate.
- The appropriate measures and/or action plan for remediation, if pressure drop levels are occurring outside the normal operating range, are:
  - Either the control equipment causing the problem 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 problem 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.

#### **Daily**

- Check and document the pressure drop across the scrubber. If the pressure drop falls out of the normal operating range of 0 – 2 inches H<sub>2</sub>O, corrective action will be taken within 8 hours to return the pressure drop to normal.
- Conduct observations of the stack and areas adjacent to the stack to determine if droplet reentrainment is occurring from an improperly operating mist eliminator. The signs of droplet reentrainment may include fallout of solid-containing droplets, discoloration of the stack and adjacent surfaces, or a mud lip around the stack. If droplet reentrainment is occurring, the appropriate measures for remediation will be implemented within eight (8) hours.

#### **Weekly**

- Check liquid pressure gauges on supply headers to the scrubber to monitor for problems such as nozzle pluggage, header pluggage, and nozzle erosion. Pluggage problems are indicated by higher than normal pressures and erosion problems are indicated by less than normal pressures. If the liquid pressure is out of the normal operating range of 0 – 2 inches H<sub>2</sub>O, corrective action will be taken within eight (8) hours to return the pressure to normal.

#### **Quarterly**

- Conduct a walk-around inspection of the entire system to search for leaks. If leaks in the system are detected, the appropriate measures for remediation will be implemented within eight (8) hours.

#### **Semi-annually**

- Conduct an internal inspection of the scrubber to search for signs of :

1. corrosion and erosion
2. solids deposits in packed beds or tray orifices
3. solids accumulation in mist eliminators
4. Plugged or eroded spray nozzles

If any of these conditions exist the appropriate measures for remediation will be implemented within eight (8) hours.

### **Record Keeping**

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

1. Maintain a record of all inspections and any action resulting from the inspection.
2. Maintenance and inspection records.

### **Quality Control**

- All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications.

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 9B**

### Associated Equipment

Associated Emission Unit ID Numbers: 17

Emissions Control Equipment ID Number: CE-20

Emissions Control Equipment Description: Baghouse (BH#5)

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Emission Unit vented through this Emission Point: 17

Emission Unit Description: Electric Arc Furnace and Canopy Area

Raw Material/Fuel: Steel Scrap & Castings

Rated Capacity: 9.5 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): See Footnote <sup>(1)</sup>

<sup>(1)</sup> Opacity limits are:

- Per 567 IAC 23.3(2)"d" the limit on the stack is 40%. In addition, 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).
- Per 40 CFR §63.7690(a)(7), fugitive emissions shall not be discharged to the atmosphere from the foundry operations that exhibit opacity greater than 20% on a six (6) minute average except for one (1) six (6) minute average per hour that does not exceed 27%.

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de" <sup>(2)</sup>

DNR Construction Permit 06-A-449-S4

<sup>(2)</sup> IAC reference to Subpart EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Pollutant: PM<sub>10</sub>

Emission Limit(s): 1.91 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-449-S4

Pollutant: Particulate Matter (PM)

Emission Limit(s): See Footnote <sup>(3)</sup>

<sup>(3)</sup> Per 40 CFR §63.7690(a)(1), emissions discharged to the atmosphere shall not exceed either:

- 0.005 grains of PM per dry standard cubic foot (gr/dscf), or
- 0.0004 gr/dscf of total metal hazardous air pollutants (HAP)

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de" <sup>(2)</sup>

DNR Construction Permit 06-A-449-S4

<sup>(2)</sup> IAC reference to Subpart EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 500 ppmv

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

DNR Construction Permit 06-A-449-S4

Pollutant: Total Metal HAP

Emission Limit(s): See Footnote <sup>(3)</sup>

<sup>(3)</sup> Per 40 CFR §63.7690(a)(1), emissions discharged to the atmosphere shall not exceed either:

- 0.005 grains of PM per dry standard cubic foot (gr/dscf), or
- 0.0004 gr/dscf of total metal hazardous air pollutants (HAP)

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de" <sup>(2)</sup>

DNR Construction Permit 06-A-449-S4

<sup>(2)</sup> IAC reference to Subpart EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

### **Operational Limits & Requirements**

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

### **NESHAP Applicability**

The facility (plant number 56-01-025) is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de"

DNR Construction Permit 06-A-449-S4

### Operating Limits

Operating limits for this emission unit shall be:

- A. Per 40 CFR §63.7700(a), the owner or operator shall either:
  - (1) Comply with the scrap certification requirements of 40 CFR §63.7700(b) or
  - (2) Prepare and implement a plan for the selection and inspection of scrap according to the requirements of 40 CFR §63.7700(c).
- B. Per 40 CFR §63.7710(b), the owner or operator shall prepare and operate at all times according to a written operation and maintenance plan. Each plan shall contain the elements described in 40 CFR §63.7710(b)(1) – 40 CFR §63.7710(b)(6).
- C. Per 40 CFR §63.7741(b), the owner or operator shall install, operate, and maintain a bag leak detection system in the baghouse (CE-20) according to the requirements in 40 CFR §63.7741(b)(1) – 40 CFR §63.7741(b)(7).
- D. Per 40 CFR §63.7740(c), the owner or operator shall:
  - (1) Monitor the pressure drop across each cell of the baghouse (CE-20) each day to ensure pressure drop is in normal operating range identified in manual.
  - (2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.
  - (3) Check the compressed air supplied for pulse-jet baghouses each day.
  - (4) Monitor cleaning cycles to ensure proper operation using appropriate methodology.
  - (5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.
  - (6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (knead or bent) or lying on their sides.
  - (7) Confirm the physical integrity of the baghouse (CE-20) through quarterly visual inspections of the baghouse (CE-20) interior for air leaks.
  - (8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.
- E. The facility (plant number 56-01-025) shall:
  - Do all operation and maintenance required by NESHAP Subpart EEEEE per 40 CFR §63.7741 not specified above and
  - Do all monitoring required by NESHAP Subpart EEEEE per 40 CFR §63.7740 not specified above.

Authority for Requirement: DNR Construction Permit 06-A-449-S4

### Reporting and Recordkeeping:

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

- A. Per 40 CFR §63.7753, the owner or operator shall keep all records related to NESHAP Subpart EEEEE onsite for at least two (2) years after the date of each occurrence, measurement, maintenance, corrective action, report, and record.
- B. Per 40 CFR §63.7745(b), the owner or operator shall keep all operation and maintenance plans required by NESHAP Subpart EEEEE for the life of the iron foundry or until the iron foundry is no longer subject to the requirements of NESHAP Subpart EEEEE.

- C. Per 40 CFR §63.7743(c), the owner or operator shall:
- (1) Record all information needed to document conformance with the requirements of 40 CFR §63.7740(c) and
  - (2) Maintain records of the times the bag leak detection system sounded, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.
- D. The owner or operator shall keep all records as required by 40 CFR §63.7744, 40 CFR §63.7745, and 40 CFR §63.7752

Authority for Requirement: DNR Construction Permit 06-A-449-S4

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 60.2

Stack Opening, (inches, dia.): 60

Exhaust Flow Rate (scfm): 59,100

Exhaust Temperature (°F): 120

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-449-S4

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

**Monitoring Requirements**

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

**Stack Testing:**

Pollutant – PM (Federal)

Stack Test – Once every five (5) years (last test demonstrated compliance on 8/1/2012.

Next test due before 8/1/2017).<sup>(1)(2)(3)</sup>

Test Method – 40 CFR 60, Appendix A, Method 5

Authority for Requirement – DNR Construction Permit 06-A-449-S4

Pollutant – Opacity

Stack Test – Once every six (6) months <sup>(2) (4) (5)</sup>

Test Method – Opacity – 40 CFR Part 60, Appendix A, Method 9

Authority for Requirement – DNR Construction Permit 06-A-449-S4

Pollutant – Total Metal HAP

Stack Test – Once every five (5) years <sup>(1) (2) (3)</sup>

Test Method – Total Metal HAP – 40 CFR Part 60, Appendix A, Method 29

Authority for Requirement – DNR Construction Permit 06-A-449-S4

- (1) Testing shall be conducted per 40 CFR §63.7732 to demonstrate compliance with either the PM limit or the Total Metal HAP limit, which are from NESHAP Subpart EEEEE.
- (2) Stack testing shall be conducted on EP 9B and EP 51 simultaneously.
- (3) Per 40 CFR §63.7731(a), subsequent performance tests shall be conducted no less frequently than every five (5) years and each time the owner or operator elects to change an operating limit to comply with a different alternative emission limit (if applicable).
- (4) Testing shall be conducted on both the stack to demonstrate compliance with 567 IAC 23.3(2)“d” and on the foundry operations to demonstrate compliance with 40 CFR §63.10895(e).
- (5) Per 40 CFR §63.7731(b), subsequent performance tests shall be conducted no less frequently than once every six (6) months.

**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: 10**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
10	14a	Mold Making	Sand	12.5 tons of sand/hr	CE-06 Cartridge Filter BH #9
	14b	Mold Making	Resin	12.5 tons of sand/hr	
	14d	Mold Making	Coating	12.5 tons of sand/hr	
	21	Pouring & Cooling	Metal	10 tons of metal/hr	
	23	Large Casting Shakeout	Castings	2 tons/hr	
	26	Burn Rail	Castings	10 tons of metal/hr	

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): See Footnote <sup>(1)</sup>

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

DNR Construction Permit 08-A-329-S4

<sup>(1)</sup> Opacity limits apply to both the stack and the building as stated below:

- **Stack:**
  - Per 567 IAC 23.3(2)"d", visible emissions shall not exceed 40% from the emission point.
  - 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).
- **Building:**
  - Per 40 CFR §63.7690(a)(7), fugitive emissions from the building shall not exceed 20% opacity (6-minute average), except for one (1) 6-minute average per hour that does not exceed 27% opacity.

Pollutant: PM<sub>10</sub>

Emission Limit(s): 2.38 lb/hr

Authority for Requirement: DNR Construction Permit 08-A-329-S4

Pollutant: Particulate Matter (PM) (Federal)

Emission Limit(s): 0.010 gr/dscf <sup>(2)</sup>

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de" <sup>(3)</sup>

DNR Construction Permit 08-A-329-S4

<sup>(2)</sup> Per 40 CFR §63.7690(a)(1), the emissions shall not exceed either the PM limit or the Total Metal HAP limit.

<sup>(3)</sup> Iowa reference to Subpart EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Pollutant: Total Metal HAP

Emission Limit(s): 0.0008 gr/dscf <sup>(4)</sup>

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de" <sup>(3)</sup>

DNR Construction Permit 08-A-329-S4

<sup>(3)</sup> Iowa reference to Subpart EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

<sup>(4)</sup> Per 40 CFR §63.7690(a)(1), the emissions shall not exceed either the PM limit or the Total Metal HAP limit.

### **Operational Limits & Requirements**

*The owner/operator of each emission unit shall comply with the operational limits and requirements listed below.*

### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

The **facility (plant number 62-01-001)** is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP). The **Mold Making (EUs 14a, 14b, and 14d)**, **Ladle Preheat (EU 20)**, and **Pouring & Cooling (EU 21)** all have applicable requirements under Subpart EEEEE.

Authority for Requirement: 567 IAC 23.1(4)"de"

DNR Construction Permit 08-A-329-S4

### **Operating Limits:**

Operating limits for these emission units shall be:

- A. As specified in 40 CFR §63.7700, the owner or operator shall comply with the certification requirements of 40 CFR §63.7700(b) or prepare and implement a plan for the selection and inspection of scrap according to the requirements of CFR §63.7700(c).
- B. As specified in 40 CFR §63.7710(b), the owner or operator shall prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device and emissions source subject to an emission limit in 40 CFR §63.7690(a) which includes, but is not limited to the following:
  - (1) Per 40 CFR §63.7710(b)(3), a preventative maintenance plan for the baghouse associated with EP 10, including a preventative maintenance schedule that is consistent with the manufacturer's instructions and for routine and long-term maintenance.
  - (2) As specified in §63.7710(b)(4), a site-specific monitoring plan for each bag leak detection system. The owner and operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan must address all the items identified in 40 CFR §63.7710(b)(4)(i) through 40 CFR §63.7710(b)(4)(v).
  - (3) As specified in §63.7710(b)(5), a corrective action plan for the baghouse associated with EP 10. The plan must include the requirement that, in the event a bag leak

detection system alarm is triggered, the owner or operator must initiate corrective action to determine the cause of the alarm within one (1) hour of the alarm, initiate corrective action to correct the cause of the problem within twenty-four (24) hours of the alarm, and complete the corrective action as soon practicable.

- C. Per 40 CFR §63.7741(b), the owner or operator shall install, operate, and maintain a bag leak detection system in accordance with 40 CFR §63.7741(b)(1) through 40 CFR §63.7741(b)(7).

Authority for Requirement: DNR Construction Permit 08-A-329-S4

Reporting and Recordkeeping:

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

Per 40 CFR §63.7753, the owner or operator shall keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report and record. Per 40 CFR §63.7745(b), the owner or operator shall keep all operation and maintenance plans required by NESHAP Subpart EEEEE for the life of the iron foundry or until the iron foundry is no longer subject to the requirements of NESHAP Subpart EEEEE.

- A. Per 40 CFR §63.7740(b), the owner or operator shall at all times monitor the relative change in PM loading using a bag leak detection system according requirements in §63.7741(b) and conduct inspections according to the requirements specified in (c)(1) through (8) of §63.7740(c). The requirements of 40 CFR §63.7740(c)(1) through 40 CFR §63.7740(c)(8) are:

- (1) Per 40 CFR §63.7740(c)(1), monitor the pressure drop across each cell of the baghouse associated with EP 10 each day to ensure pressure drop is in normal operating range identified in manual.
- (2) As specified in §63.7740(c)(2), confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.
- (3) Per 40 CFR §63.7740(c)(3), check compressed air supply for pulse-jet baghouses each day.
- (4) Per 40 CFR §63.7740(c)(4), monitor cleaning cycles to ensure proper operation using appropriate methodology.
- (5) Per 40 CFR §63.7740(c)(5), check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.
- (6) Per 40 CFR §63.7740(c)(6), make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (knead or bent) or lying on their sides.
- (7) Per 40 CFR §63.7740(c)(7), confirm the physical integrity of the baghouse associated with EP 10 through quarterly visual inspections of the baghouse associated with EP 10 interior for air leaks.
- (8) Per 40 CFR §63.7740(c)(8), inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

- B. Per 40 CFR §63.7743(c)(2), maintain records of the times the bag leak detection system alarm sounded, and for each valid alarm, the time owner/operator initiate corrective action,

- the corrective action taken, and the date on which corrective action was completed.
- C. Per 40 CFR §63.7743(c)(1), inspect and maintain the baghouse associated with EP 10 according to the requirements of 40 CFR §63.7740(c)(1) through 40 CFR §63.7740(c)(8) and recording all information needed to document conformance with these requirements.
  - D. Per 40 CFR §63.7744, the owner or operator shall maintain records that document continuous compliance with certification requirements in 40 CFR §63.7700(b) or with procedures in scrap selection and inspection plan required in 40 CFR §63.7700(c). Records documenting compliance with the scrap selection and inspection plan must include a copy (kept onsite) of the procedures used by scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.
  - E. Per 40 CFR 63.7745(a)(2), record all information needed to document conformance with the preventive maintenance plan required by 40 CFR §63.7710(b)(3).
  - F. Per 40 CFR 63.7745(a)(3), record all information needed to document conformance with the site specific monitoring plan required by 40 CFR §63.7710(b)(4).
  - G. Per 40 CFR 63.7745(a)(4), record all information needed to document conformance with the corrective action plan required by 40 CFR §63.7710(b)(5).
  - H. Per 40 §63.7745(b), the owner or operator shall keep all operation and maintenance plans required by NESHAP Subpart EEEEE for the life of the iron foundry or until the iron foundry is no longer subject to the requirements of NESHAP Subpart EEEEE.
  - I. Per 40 CFR §63.7752(a), the owner or operator shall keep the records specified in 40 CFR §63.7752(a)(1) through 40 CFR §63.7752(a)(4).
  - J. Per 40 CFR §63.7752(c), the owner or operator shall keep records required by 40 CFR §63.7743, 40 CFR §63.7744, and 40 CFR §63.7745 to show continuous compliance with each emission limitation, work practice standard, and operation and maintenance requirement that applies.

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 08-A-329-S4

### **Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 73

Stack Opening, (inches, dia.): 52

Exhaust Flow Rate (scfm): 56,200

Exhaust Temperature (°F): 100

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 08-A-329-S4

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

**Monitoring Requirements**

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

**Stack Testing:**

Pollutant – PM (federal)

Stack Test – Once every five (5) years (the last test demonstrated compliance on 7/30/2013. Next test due before 7/30/2018) <sup>(1)</sup>

<sup>(1)</sup> As specified in §63.7731, Keokuk Mills, LLC must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emission limitations no less frequently than every five (5) years.

Test Method – 40 CFR 60, Appendix A, Method 5

Authority for Requirement – DNR Construction Permit 08-A-329-S4

Pollutant – NESHAP Opacity

Stack Test – Every 6 months <sup>(2)</sup>

<sup>(2)</sup> Opacity limit is for the building or structure housing any iron and steel foundry emissions source (i.e., not point specific).

Test Method – Opacity – 40 CFR Part 60, Appendix A, Method 9

Authority for Requirement – DNR Construction Permit 08-A-329-S4

Pollutant – Total Metal HAP

Stack Test – Once every five (5) years <sup>(1)</sup>

<sup>(1)</sup> As specified in §63.7731, Keokuk Mills, LLC must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emission limitations no less frequently than every five (5) years.

Test Method – Opacity – 40 CFR 60, Appendix A, Method 29

Authority for Requirement – DNR Construction Permit 08-A-329-S4

**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: 11FUG (Internally Vented)**

Associated Equipment

Associated Emission Unit ID Numbers: 36

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Emission Unit vented through this Emission Point: 36  
Emission Unit Description: Special Products Grinding  
Raw Material/Fuel: Castings  
Rated Capacity: 0.83 tons/hr

**Applicable Requirements**

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

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

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

Pollutant: Particulate Matter (PM)  
Emission Limits: 0.05 gr/dscf  
Authority for Requirement: 567 IAC 23.4(6)

**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: 37i (Internally Vented)**

Associated Equipment

Associated Emission Unit ID Numbers: 37n1, 37n2, 37s3, and 37s4

Emissions Control Equipment ID Number: None for EU 37n1, CE 37b for EU 37n2, and Baghouse CE 37a for EUs 37s3 and 37s4

Emissions Control Equipment Description: None for EU 37n1, Baghouse (CE 37b) for EU 37n2, and Baghouse (CE 37a) for EUs 37s3 and 37s4

Emission Unit vented through this Emission Point: 37n1, 37n2, 37s3, and 37s4

Emission Unit Description: 4 GMAW Casting Repair Welders

Raw Material/Fuel: Welding Wire

Rated Capacity: Each rated at 4.32 lb weld wire/hour

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

<sup>(1)</sup> 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).

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

DNR Construction Permit 04-A-1101-S2

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.42 lb/hr

Authority for Requirement: DNR Construction Permit 04-A-1101-S2

Pollutant: Particulate Matter (PM)

Emission Limit: 0.1gr/dscf, 0.42 lb/hr

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

DNR Construction Permit 04-A-1101-S2

**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 this 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: 12**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
12	27	200 Blow System	Sand	12 tons/hr	CE-05: Baghouse
	28	GIW East	Sand	30 tons/hr	
	35	Turntable Blast	Castings	1 ton/hr	

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

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

DNR Construction Permit 76-A-098-S8

Pollutant: PM<sub>10</sub>

Emission Limit(s): 1.42 lb/hr

Authority for Requirement: DNR Construction Permit 76-A-098-S8

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

DNR Construction Permit 76-A-098-S8

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 8.59 lb/hr

Authority for Requirement: DNR Construction Permit 76-A-098-S8

## **Operational Limits & Requirements**

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

### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This **facility (plant number 56-01-025)** is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 76-A-098-S8

### **Operating Limits:**

Operating limits for this emission unit shall be:

- A. The total sand throughput for the emission units (EUs 22, 28, and 29) shall not exceed 25,000 lbs of sand per hour.
- B. The baghouse (CE 05) shall be operated and maintained according to the manufacturer's specifications.
- C. Per 567 IAC 33.3(18)"f"(1), prior to beginning actual construction of the projects (Project Numbers 08-345 & 08-641) the owner or operator shall document:
  - (1) A description of the projects (Project Numbers 08-345 & 08-641),
  - (2) Identification of the emission unit(s) whose emissions of a regulated NSR pollutant could be affected by the projects (Project Number 08-345 & 08-641), and
  - (3) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions (BAE), the projected actual emissions (PAE), the amount of emissions excluded under paragraph "3" of the definition of "*projected actual emissions*" in subrule 33.3(1), an explanation describing why such amount was excluded, and any netting analysis if applicable.
- D. Per 567 IAC 33.3(18)"f"(4), the owner or operator shall:
  - (1) Monitor the emission of any regulated NSR pollutant that could increase as a result of the project that is emitted by any emissions unit identified in Condition 14.C.(2).
  - (2) Calculate the annual emissions, in tons per year on a calendar-year basis, for a period of ten (10) years following resumption of regular operations and maintain a record of regular operations after the change.
  - (3) Per 567 IAC 33.3(18)"g", the owner or operator shall make the information required to be documented and maintained pursuant to 567 IAC 33.3(18)"f" available for review upon request for inspection by the Department or the general public pursuant to the requirements for Title V operating permits contained in 567 IAC 22.107(6).

Authority for Requirement: DNR Construction Permit 76-A-098-S8

Reporting & Record keeping:

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. At the end of each working day:
  - Record the total amount of sand processed over the previous day by EUs 22, 28, and 29 and
  - Record the number of hours EUs 22, 28, and 29 processed sand over the previous working day.
- B. Within seven (7) days of the end of each month, calculate and record the daily average hourly production rate for EUs 22, 28, and 29 for each day over the previous month by dividing the amount of sand processed on a given day by the number of hours the equipment operated on that given day.
- C. A log of all maintenance and inspection activities performed on the baghouse (CE 05). This log shall include, but is not necessarily limited to:
  - The date and time any inspection and/or maintenance was performed on the baghouse (CE 05);
  - Any issues identified during the inspection;
  - Any issues addressed during the maintenance activities;
  - Identification of the staff member performing the maintenance or inspection.
- D. Per 567 IAC 33.3(18)"f"(1), the owner or operator shall maintain a record of the information required in Condition C.
- E. Per 567 IAC 33.3(18)"f"(4) and 567 IAC 33.3(18)"f"(5), the owner or operator shall maintain a record containing the information required in D and that record shall be retained by the owner or operator for a period of ten (10) years after the projects (Project Number 08-345 & 08-641) are completed.

Authority for Requirement: DNR Construction Permit 76-A-098-S8

Emission Point Characteristics

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

Stack Height, (ft, from the ground): 66

Stack Opening, (inches, dia.): 37.5

Exhaust Flow Rate (scfm): 16,400

Exhaust Temperature (°F): 70

Discharge Style: Unobstructed vertical

Authority for Requirement: DNR Construction Permit 76-A-098-S8

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**CAM Plan for EP-12 Baghouse**

*This emission point shall conform to the conditions listed below*

1. Background

A. Emission Unit:

Facility: Keokuk Mills, LLC  
Description: 200 Blow System, GIW East, Turntable Blast  
Emission Point Identification Number: EP-12  
Emission Unit Identification Numbers: EU-27, EU-28, EU-35  
Control Device Identification Number: CE-05

B. Applicable Regulations, Emission Limits, and Monitoring Requirements:

Regulation No.: 567 IAC 23.3(2)"d"  
567 IAC 23.4(6)  
DNR Construction Permit 76-A-098-S8

Opacity Emission Limit: 40%  
Particulate Emission Limit: PM<sub>10</sub>, PM: 1.42 lb/hr, 0.05 gr/scf  
Current Monitoring Requirement: Daily pressure drop across baghouse  
Weekly opacity

C. Control Technology:

Baghouse

2. Monitoring Approach

The key elements of the monitoring approach are presented in Table A. The selected performance indicators are baghouse differential pressure and visible emissions.

Table A—Monitoring Approach

Applicable Requirements	PM Limits	Opacity
General Monitoring Approach	Pressure drop readings	Visible emissions observations

Applicable Requirements	PM Limits	Opacity
Daily	Check for dust collector differential pressure.	
Weekly		Where applicable, visible emissions observations via Method 22 are performed weekly to ensure no visible emissions during the material handling operations of this unit. If a visible emissions reading cannot be made, record the differential pressure reading.
Monthly		Inspect cleaning sequence, air delivery system, and hopper functions to insure equipment is operating properly.
Quarterly		Inspect bags for leaks and wear.
Semi-Annually		All baghouse components are inspected every 6 months to insure proper operation.
Indicator Range/Source	Pressure range: 2 to 6 inches of water column.	Presence of visible emissions.
Data Collection Frequency	Daily: Pressure range observations. Quarterly and Semiannually: Equipment inspections.	Weekly: Visible emissions observations. Quarterly and Semiannually: Equipment inspections.
Recordkeeping	<p>Daily logs of differential pressure readings.</p> <p>Weekly logs of emissions observations.</p> <p>All daily, monthly, quarterly, and semi-annually required inspections and maintenance. The date, time, and the location of the bag in relationship to the other bags must document bag replacement.</p> <p>All corrective actions resulting from compliance indicators and inspections and maintenance.</p> <p>Excursion, indicator opacity exceedance, and excess emissions reports.</p> <p>Maintenance and inspection records will be kept for at least five (5) years and be available to the IDNR upon request.</p>	

Applicable Requirements	PM Limits	Opacity
QA/QC	<p>The baghouse and monitoring equipment will be operated and maintained according to manufacturer recommendations and/or as outlined in the above monitoring requirements.</p> <p>Keokuk Mills, LLC will maintain an adequate inventory of spare parts.</p> <p>Visible emissions observer trained per Method 22.</p>	

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 15**

### Associated Equipment

Associated Emission Unit ID Numbers: 25  
Emissions Control Equipment ID Number: CE-07  
Emissions Control Equipment Description: Baghouse #8

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Emission Unit vented through this Emission Point: 25  
Emission Unit Description: Tumble Blast (34 cu ft)  
Raw Material/Fuel: Castings  
Rated Capacity: 3.06 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of (0%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 76-A-099-S2

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.508 lb/hr

Authority for Requirement: DNR Construction Permit 76-A-099-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 76-A-099-S2

#### **Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 37.7

Stack Opening, (inches, dia.): 15.25 x 22.25

Exhaust Flow Rate (scfm): 7,000

Exhaust Temperature (°F): 89

Discharge Style: Vertical, obstructed

Authority for Requirement: DNR Construction Permit 76-A-099-S2

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**CAM Plan for EP-15 Baghouse**

*This emission point shall conform to the conditions listed below.*

1. Background

A. Emission Unit:

Facility: Keokuk Mills, LLC  
Description: Tumble Blast (34 cu ft)  
Emission Point Identification Number: EP-15  
Emission Unit Identification Numbers: EU-25  
Control Device Identification Number: CE-07

B. Applicable Regulations, Emission Limits, and Monitoring Requirements:

Regulation No.: 567 IAC 23.3(2)"d"  
567 IAC 23.4(6)  
DNR Construction Permit 76-A-099-S2

Opacity Emission Limit: 40%  
PM<sub>10</sub> Emission Limit: 0.508 lb/hr  
Particulate Emission Limit: 0.05 gr/dscf  
Current Monitoring Requirement: Daily pressure drop across baghouse  
Weekly opacity

C. Control Technology:

Baghouse

## 2. Monitoring Approach

The key elements of the monitoring approach are presented in Table A. The selected performance indicators are baghouse differential pressure and visible emissions.

Table A—Monitoring Approach

Applicable Requirements	PM Limits	Opacity
General Monitoring Approach	Pressure drop readings	Visible emissions observations
Daily	Check baghouse differential pressure.	
Weekly		<p>Visible emissions shall be observed on a weekly basis to ensure no visible emissions during the material handling operation of the unit. If visible emissions are observed this would be an exceedance not a violation and action will be taken as soon as possible, but no later than eight hours. If weather conditions prevent the observer from conducting an observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake readings at approximately two-hour intervals throughout the day. If unsuccessful that day due to weather, an observation shall be made the following day the unit operates.</p> <p>Maintain a written record of the observation and any action resulting from the observation.</p>
Quarterly	<p>Thoroughly inspect cartridge filters for leaks and wear. (Look for obvious holes or tears in the cartridge filters.)</p> <p>If leaks or abnormal conditions are detected, the appropriate measures for remediation will be implemented within eight hours. Cartridge filter replacement should be documented by identifying the date, time and location of the cartridge filter in relationship to the other cartridge filters. The location should be identified on an overhead drawing of the cartridge filter layout in the cartridge filter system.</p> <p>Maintain a written record of the inspection and any action resulting from the inspection.</p>	
Semi-annually	Every six months, inspect all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods.	

	<p>If leaks or abnormal conditions are detected the appropriate measures for remediation will be implemented within eight hours.</p> <p>Maintain a written record of the inspection and any action resulting from the inspection.</p>	
Indicator Range/Source	Normal Operating Pressure Range: 3 – 15 inches H <sub>2</sub> O.	Presence of visible emissions.
Data Collection Frequency	<p>Daily: Pressure range observations.</p> <p>Quarterly and Semiannually: Equipment inspections.</p>	<p>Weekly: Visible emissions observations.</p> <p>Quarterly and Semiannually: Equipment inspections.</p>
Recordkeeping	<p>Daily logs of pressure readings.</p> <p>Weekly logs of emissions observations readings.</p> <p>All daily, monthly, quarterly, and semi-annually required inspections and maintenance. The date, time, and the location of maintenance or repair performed.</p> <p>All corrective actions resulting from compliance indicators and inspections and maintenance.</p> <p>Excursion, indicator opacity exceedance, and excess emissions reports.</p> <p>Manual log entries are made based on gauge readings and the observation (or not) of visible emissions.</p> <p>Maintenance personnel record all maintenance/inspection performed on the baghouse and actions resulting from the inspection.</p> <p>Maintenance and inspection records will be kept for at least five (5) years and be available to the IDNR upon request.</p>	
Quality Control	<p>The filter equipment will be operated and maintained according to the manufacturer's recommendations.</p> <p>An adequate inventory of spare parts shall be kept.</p> <p>Visible emissions observer trained per Method 22.</p>	

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 17**

### Associated Equipment

Associated Emission Unit ID Numbers: 31  
Emissions Control Equipment ID Number: CE-09  
Emissions Control Equipment Description: Baghouse

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Emission Unit vented through this Emission Point: 31  
Emission Unit Description: 5 Kwic Arc Booths  
Raw Material/Fuel: Carbon Rod  
Rated Capacity: 5 lbs/hr each

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 01-A-181-S6

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.79 lb/hr

Authority for Requirement: DNR Construction Permit 01-A-181-S6

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr./dscf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 01-A-181-S6

### **Operational Limits & Requirements**

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

#### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This **facility (plant number 56-01-025)** is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 01-A-181-S6

#### **Operating Limits:**

Operating limits for this emission unit shall be:

- A. The baghouse (CE 09) shall be operated and maintained according to the manufacturer's specifications.

#### **Reporting and Recordkeeping:**

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. A log of all maintenance and inspection activities performed on the baghouse (CE 09). This log shall include, but is not necessarily limited to:
- The date and time any inspection and/or maintenance was performed on the baghouse (CE 09);
  - Any issues identified during the inspection;
  - Any issues addressed during the maintenance activities;
  - Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 01-A-181-S6

#### **Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 35

Stack Opening, (inches, dia.): 29.5

Exhaust Flow Rate (scfm): 13,400

Exhaust Temperature (°F): 70

Discharge Style: Unobstructed vertical

Authority for Requirement: DNR Construction Permit 01-A-181-S6

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may

vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

**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)

**Baghouse Agency Operation and Maintenance Plan**

**Monitoring Guidelines**

The facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation, and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time, or the presence of a monitored abnormal condition. An excursion does not necessarily indicate a violation of an applicable requirement.

If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the excursion to the department and conduct source testing within 90 days of the excursion to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits, new indicator ranges must be set for monitoring, and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, the facility must submit a compliance schedule to the department within 60 days of obtaining test results. This schedule should outline the corrective action planned by the facility, and also include a plan to demonstrate compliance once corrective measures have been completed.

**General**

- Periodic Monitoring is not required during periods of time greater than one day in which the source does not operate.

**Weekly**

- Visible emissions shall be observed on a weekly basis to ensure no visible emissions during the material handling operation of the unit. If visible emissions are observed this would be an exceedance not a violation and action will be taken as soon as possible, but no later than

eight hours. If weather conditions prevent the observer from conducting an observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake readings at approximately two-hour intervals throughout the day. If unsuccessful that day due to weather, an observation shall be made the following day the unit operates.

- Check and document the baghouse pressure drop. If the pressure drop falls out of the normal operating range, (2 – 6 inches water), corrective action will be taken within 8 hours to return the pressure drop to normal.

Maintain a written record of the observation and any action resulting from the observation.

### **Monthly**

- Check the cleaning sequence of the baghouse.
- Pulse jet baghouse - check the air delivery system
- Check the hopper functions and performance.
- If leaks or abnormal conditions are detected, the appropriate measures for remediation will be implemented within eight hours.

Maintain a written record of the inspection and any action resulting from the inspection.

### **Quarterly**

- Thoroughly inspect bags for leaks and wear. (Look for obvious holes or tears in the bags.)
- If leaks or abnormal conditions are detected, the appropriate measures for remediation will be implemented within eight hours. Bag replacement should be documented by identifying the date, time and location of the bag in relationship to the other bags. The location should be identified on an overhead drawing of the bag layout in the baghouse.

Maintain a written record of the inspection and any action resulting from the inspection.

### **Semiannual**

- Every six months, inspect all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods.
- If leaks or abnormal conditions are detected the appropriate measures for remediation will be implemented within eight hours.

Maintain a written record of the inspection and any action resulting from the inspection.

### **Record Keeping and Reporting**

Maintenance and inspection records will be kept for five years and be available upon request.

### **Quality Control**

- The filter equipment will be operated and maintained according to the manufacturer's recommendations.
- An adequate inventory of spare parts shall be kept.

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 18-1, 18-2, 18-3, 18-4, 18-5, 18-6, & 18-7**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity
18-1	32A	Casting Heat Treat (Oven #6511)	Natural Gas	7 MMBtu/hr
18-2	32B	Casting Heat Treat (Oven #6512)	Natural Gas	7 MMBtu/hr
18-3	32C	Casting Heat Treat (Oven #6513)	Natural Gas	7 MMBtu/hr
18-4	32C	Casting Heat Treat (Oven #6513)	Natural Gas	7 MMBtu/hr
18-5	32D	Casting Heat Treat (Oven #6514)	Natural Gas	7 MMBtu/hr
18-6	32D	Casting Heat Treat (Oven #6514)	Natural Gas	7 MMBtu/hr
18-7	32E	Casting Heat Treat (Oven #6515)	Natural Gas	4.9 MMBtu/hr

**Applicable Requirements**

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

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

EP	EU	Pollutant	Emission Limit	Authority for Requirement	
				567 IAC	DNR Construction Permit
18-1	32A	Opacity	40% <sup>(1)</sup>	23.3(2)"d"	01-A-219-S3
		PM <sub>10</sub>	0.056 lb/hr	---	
		PM	0.1 gr/scf	23.3(2)"a"	
		SO <sub>2</sub>	500 ppmv	23.3(3)"e"	
		NO <sub>x</sub>	0.70 lb/hr	---	
18-2	32B	Opacity	40% <sup>(1)</sup>	23.3(2)"d"	01-A-220-S4
		PM <sub>10</sub>	0.056 lb/hr	---	
		PM	0.1 gr/scf	23.3(2)"a"	
		SO <sub>2</sub>	500 ppmv	23.3(3)"e"	
		NO <sub>x</sub>	0.70 lb/hr	---	
18-3	32C	Opacity	40% <sup>(1)</sup>	23.3(2)"d"	01-A-221-S3
		PM <sub>10</sub>	0.024 lb/hr	---	
		PM	0.1 gr/scf	23.3(2)"a"	
		SO <sub>2</sub>	500 ppmv	23.3(3)"e"	
		NO <sub>x</sub>	0.40 lb/hr	---	
18-4	32C	Opacity	40% <sup>(1)</sup>	23.3(2)"d"	01-A-222-S3
		PM <sub>10</sub>	0.024 lb/hr	---	
		PM	0.1 gr/scf	23.3(2)"a"	
		SO <sub>2</sub>	500 ppmv	23.3(3)"e"	
		NO <sub>x</sub>	0.40 lb/hr	---	
18-5	32D	Opacity	40% <sup>(1)</sup>	23.3(2)"d"	01-A-223-S3
		PM <sub>10</sub>	0.024 lb/hr	---	
		PM	0.1 gr/scf	23.3(2)"a"	
		SO <sub>2</sub>	500 ppmv	23.3(3)"e"	
		NO <sub>x</sub>	0.40 lb/hr	---	
18-6	32D	Opacity	40% <sup>(1)</sup>	23.3(2)"d"	01-A-224-S3
		PM <sub>10</sub>	0.024 lb/hr	---	
		PM	0.1 gr/scf	23.3(2)"a"	
		SO <sub>2</sub>	500 ppmv	23.3(3)"e"	
		NO <sub>x</sub>	0.40 lb/hr	---	

EP	EU	Pollutant	Emission Limit	Authority for Requirement	
				567 IAC	DNR Construction Permit
18-7	32-E	Opacity	40% <sup>(1)</sup>	23.3(2)"d"	01-A-225-S4
		PM <sub>10</sub>	0.048 lb/hr	---	
		PM	0.1 gr/scf	23.3(2)"a"	
		SO <sub>2</sub>	500 ppmv	23.3(3)"e"	
		NO <sub>x</sub>	0.35 lb/hr	---	

<sup>(1)</sup> An exceedance of the indicator opacity of 0% 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).

**Operational Limits & Requirements**

*The owner/operator of each emission unit shall comply with the operational limits and requirements listed below.*

**Operating Limits:**

Operating limits for these emission points shall be:

These units shall operate on natural gas only.

- Authority for Requirement: DNR Construction Permit 01-A-219-S3 (EP 18-1)  
DNR Construction Permit 01-A-220-S4 (EP 18-2)  
DNR Construction Permit 01-A-221-S3 (EP 18-3)  
DNR Construction Permit 01-A-222-S3 (EP 18-4)  
DNR Construction Permit 01-A-223-S3 (EP 18-5)  
DNR Construction Permit 01-A-224-S3 (EP 18-6)

**Emission Point Characteristics**

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

EP	Stack Characteristics					Authority for Requirement: DNR Construction Permit
	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia)	Exhaust Temp. (°F)	Exhaust Flowrate	
18-1	55.58	Unobstructed Vertical	13 x 13	450	1,000 scfm	01-A-219-S3
18-2	54.92	Unobstructed Vertical	13 x 13	450	1,000 scfm	01-A-220-S4
18-3	46.58	Unobstructed Vertical	38.5 x 12.5	450	1,000 scfm	01-A-221-S3
18-4	46.58	Unobstructed Vertical	38.5 x 12.5	450	1,000 scfm	01-A-222-S3
18-5	33.67	Unobstructed Vertical	24.5 x 13	450	1,000 scfm	01-A-223-S3
18-6	33.67	Unobstructed Vertical	38.5 x 13	450	1,000 scfm	01-A-224-S3
18-7	35.2	Unobstructed Vertical	36.5	690	700 scfm	01-A-225-S4

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

**Monitoring Requirements**

*The owner/operator of each emission point 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: 19**

### Associated Equipment

Associated Emission Unit ID Numbers: 33  
Control Equipment: CE-10: Baghouse, BH#2

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Emission Unit vented through this Emission Point: 33  
Emission Unit Description: Walk-in Blast  
Raw Material/Fuel: Castings  
Rated Capacity: 2 tons of castings/hr each

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

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

DNR Construction Permit 01-A-182-S4

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.17 lb/hr

Authority for Requirement: DNR Construction Permit 01-A-182-S4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)

DNR Construction Permit 01-A-182-S4

#### **Operational Limits & Requirements**

*The owner/operator of each emission unit shall comply with the operational limits and requirements listed below.*

#### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This **facility (plant number 56-01-025)** is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Operating Limits:

Operating limits for these emission points shall be:

- A. The baghouse (CE 10) shall be operated and maintained according to the manufacturer's specifications.

Reporting and Recordkeeping:

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. A log of all maintenance and inspection activities performed on the baghouse (CE 10). This log shall include, but is not necessarily limited to:
- The date and time any inspection and/or maintenance was performed on the baghouse (CE 10);
  - Any issues identified during the inspection;
  - Any issues addressed during the maintenance activities;
  - Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 01-A-182-S4

Emission Point Characteristics

*This equipment shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 26.9

Stack Opening, (inches, dia.): 24

Exhaust Flow Rate (scfm): 12,700

Exhaust Temperature (°F): 80

Discharge Style: Vertical, unobstructed

Authority for Requirement: DNR Construction Permit 01-A-182-S4

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

**Monitoring Requirements**

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

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

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

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

*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 this 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: 25-1N through 25-6S**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
25i	25-1N-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-1N
	25-1N-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-1N
	25-2N-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-2N
	25-2N-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-2N
	25-3N-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-3N
	25-3N-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-3N
	25-4N-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-4N
	25-4N-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-4N
	25-5N-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-5N
	25-5N-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-5N
	25-6N-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-6N
	25-6N-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-6N
	25-1S-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-1S
	25-1S-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-1S
	25-2S-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-2S
	25-2S-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-2S
	25-4S-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-4S
	25-4S-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-4S
	25-5S-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-5S

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
	25-5S-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-5S
	25-6S-A	Casting Welding/Weld Repair	Weld Wire & Rods	3 lb/hr (wire)	Cartridge Filters, CE25-6S
	25-6S-B	Carbon Rod Welding	Carbon Rods	5 lb/hr (rod)	Cartridge Filters, CE25-6S

### Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> 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).

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

Pollutant: PM<sub>10</sub>

Emission Limit(s): 1.08 lb/hr

Authority for Requirement: DNR Construction Permit 01-A-227-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)

DNR Construction Permit 01-A-227-S2

#### Operational Limits & Requirements

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

This permit does not set any operating limits or require operating condition monitoring at this time for these emission units.

#### 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 this 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: 26 (Internally Vented)**

### Associated Equipment

Associated Emission Unit ID Numbers: 49  
Emissions Control Equipment ID Number: CE-26  
Emissions Control Equipment Description: Cartridge Filters

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Emission Unit vented through this Emission Point: 49  
Emission Unit Description: Walk-in Blast  
Raw Material/Fuel: Castings & Shot  
Rated Capacity: 2.5 tons/hr

### **Applicable Requirements**

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

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

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

Pollutant: PM<sub>10</sub>  
Emission Limit(s): 0.21 lb/hr  
Authority for Requirement: DNR Construction Permit 09-A-757

Pollutant: Particulate Matter (PM)  
Emission Limits: 0.05gr/dscf  
Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 09-A-757

#### **Operational Limits & Requirements**

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

#### NESHAP:

The facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart EEEEE-*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries* as specified in 40 CFR Part 63 §63.7681. Except as specified in §63.7683(b), Keokuk Mills, LLC must comply with each emission limitation, work practice standard, and operation and maintenance requirement in Subpart EEEEE that applies to Keokuk Mills, LLC no later than April 23, 2007. These emission units (Welding Operations) are not subject to the requirements of 40 CFR §63.7681.

The facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart A-*General Provisions* as specified in 40 CFR Part 63 §63.7760 (Table 1).

**Monitoring Requirements**

*The owner/operator of each emission point 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 this 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: 27 FUG (Internally Vented)**

Associated Equipment

Associated Emission Unit ID Numbers: 67  
Emissions Control Equipment ID Number: CE-06  
Emissions Control Equipment Description: Baghouse

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Emission Unit vented through this Emission Point: 67  
Emission Unit Description: Large Casting Shakeout & Cooling  
Raw Material/Fuel: Castings  
Rated Capacity: 12.5 tons/hr

**Applicable Requirements**

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

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

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

Pollutant: Particulate Matter (PM)  
Emission Limits: 0.05 gr/dscf  
Authority for Requirement: 567 IAC 23.4(6)

**Monitoring Requirements**

*The owner/operator of each emission point 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 this 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: 29**

### Associated Equipment

Associated Emission Unit ID Numbers: 39  
Emissions Control Equipment ID Number: CE-13  
Emissions Control Equipment Description: Panel Filter

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Emission Unit vented through this Emission Point: 39  
Emission Unit Description: Core Spray Booth  
Raw Material/Fuel: Core Wash  
Rated Capacity: 100 lb/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of 0% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 98-A-366-S3

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.12 lb/hr

Authority for Requirement: DNR Construction Permit 98-A-366-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.01 gr/dscf

Authority for Requirement: 567 IAC 23.4(13)  
DNR Construction Permit 98-A-366-S3

### **Operational Limits & Requirements**

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

#### **Operating Limits:**

Operating limits for these emission units shall be:

This emission unit shall not use more than 210,000 pounds of core coating slurry per 12-month rolling period.

Authority for Requirement: DNR Construction Permit 98-A-366-S3

#### **Reporting & Record keeping:**

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

- A. Upon the issuance of this permit, determine the cumulative core coating slurry (in lbs/month) for each of the past twelve months.
- B. After the issuance of this permit, determine the annual amount of core coating slurry (in lbs/yr) on a rolling-12-month basis for each month of operation.

Authority for Requirement: DNR Construction Permit 98-A-366-S3

### **Emission Point Characteristics**

*This equipment shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 26.36

Stack Opening, (inches, dia.): 22

Exhaust Flow Rate (scfm): 7,600

Exhaust Temperature (°F): 84

Discharge Style: Vertical, obstructed

Authority for Requirement: DNR Construction Permit 98-A-366-S3

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

**Monitoring Requirements**

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

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

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

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

*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 this 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: 30b**

### Associated Equipment

Associated Emission Unit ID Numbers: 30b

Emissions Control Equipment ID Number: CEs 30b-1, 30b-2, 30b-3, and 30b-4

Emissions Control Equipment Description: Four (4) Bin Vent Filters

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Emission Unit vented through this Emission Point: 30b

Emission Unit Description: 300 System Reclaim Sand Tank

Raw Material/Fuel: Sand

Rated Capacity: 30 tons of sand/hr; 12 tons/hr fill rate

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

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

DNR Construction Permit 15-A-522

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)

DNR Construction Permit 15-A-522

#### **Operational Limits & Requirements**

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

#### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This **facility (plant number 56-01-025)** is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"

DNR Construction Permit 15-A-522

Operating Limits:

Operating limits for this emission unit shall be:

- A. Each bin vent filter (CEs 30b-1, 30b-2, 30b-3, and 30b-4) shall be operated and maintained according to the manufacturer's specifications.

Reporting & Record keeping:

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. A log of all maintenance and inspection activities performed on each bin vent filter (CEs 30b-1, 30b-2, 30b-3, and 30b-4). This log shall include, but is not necessarily limited to:
- The date and time any inspection and/or maintenance was performed on each bin vent filter (CEs 30b-1, 30b-2, 30b-3, and 30b-4);
  - Any issues identified during the inspection;
  - Any issues addressed during the maintenance activities;
  - Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 15-A-522

Emission Point Characteristics

*This equipment shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 67

Stack Opening, (inches, dia.): 10.4 (each)

Exhaust Flow Rate (scfm): 250 (total)

Exhaust Temperature (°F): 70

Discharge Style: Unobstructed vertical

Authority for Requirement: DNR Construction Permit 15-A-522

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

**Monitoring Requirements**

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

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

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

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

*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 this 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: 33**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
33	21	Pouring & Cooling	Metal	10 tons/hr	CE18, Torit Cartridge Filter (BH#6)
	63	Induction Furnace	Metal	4,400 lb/hr	

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> 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).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 97-A-659-S6

Pollutant: NESHAP Opacity

Emission Limit(s): 20% <sup>(2)</sup>

<sup>(2)</sup> Opacity limit from 40 CFR Part 63 Subpart EEEEE 63.7690(a)(7) for the building structure or housing which in this case refers to the canopy. Iowa adoption of National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Subpart EEEEE by reference.

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE  
567 IAC 23.1(4)"de"  
DNR Construction Permit 97-A-659-S6

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.63 lb/hr

Authority for Requirement: DNR Construction Permit 97-A-659-S6

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.005 gr/dscf, <sup>(3)</sup> 1.33 lb/hr

<sup>(3)</sup> Emission limits established in NESHAP Subpart EEEEE for electric arc furnaces as specified in 40 CFR Part 63 Subpart EEEEE 63.7690(a)(1)(i). The facility is required to meet the emission limit for Particulate Matter (PM) or, alternatively the emission limit for total metal HAPs.

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE  
567 IAC 23.1(4)"de"  
DNR Construction Permit 97-A-659-S6

Pollutant: Total Metal HAP

Emission Limit(s): 0.0004 gr/dscf <sup>(4)</sup>

<sup>(4)</sup> Emission limits established in NESHAP Subpart EEEEE for electric arc furnaces as specified in 40 CFR Part 63 Subpart EEEEE 63.7690(a)(1)(ii). The facility is required to meet the emission limit for Particulate Matter (PM) or, alternatively the emission limit for total metal HAPs.

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE  
567 IAC 23.1(4)"de"  
DNR Construction Permit 97-A-659-S6

### **Operational Limits & Requirements**

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

#### **NESHAP:**

The facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart EEEEE-*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries* as specified in 40 CFR Part 63 §63.7681. Except as specified in §63.7683(b), Keokuk Mills, LLC must comply with each emission limitation, work practice standard, and operation and maintenance requirement in Subpart EEEEE that applies to Keokuk Mills, LLC no later than April 23, 2007. This emission point includes units subject to the requirements of 40 CFR §63.7681.

The facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart A-*General Provisions* as specified in 40 CFR Part 63 §63.7760 (Table 1).

#### **Operating Limits:**

Operating limits for this emission point shall be:

- A. As specified in §63.7700, Keokuk Mills, LLC must comply with the certification requirements in paragraph (b) of §63.7700 or prepare and implement a plan for the selection and inspection of scrap according to the requirements in paragraph (c) of §63.7700.
- B. As specified in §63.7710(b), Keokuk Mills, LLC must prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device an emissions source subject to an emission limit in §63.7690(a). Which includes but is not limited to the following:
  - (1) As specified in §63.7710(b)(3), Preventative maintenance plan for the baghouse associated with EP33, including a preventative maintenance schedule that is consistent with the manufacturer's instructions and for routine and long-term maintenance.
  - (2) As specified in §63.7710(b)(4), A site-specific monitoring plan for each bag leak detection system. The owner and operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan must address all the items identified in paragraphs (b)(4)(i) through (v) of §63.7710(b)(4).
  - (3) As specified in §63.7710(b)(5), Corrective action plan for the baghouse associated with

EP33. The plan must include the requirement that, in event a bag leak detection system alarm is triggered, Keokuk Mills, LLC must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon practicable.

- C. As specified in §63.7741(b), Keokuk Mills, LLC must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (b)(1) through (7) of §63.7741(b).
- D. The total melt from the induction furnace (EU 63) shall not exceed 7,250 tons per twelve (12) month rolling period.
- E. The daily average melt of the induction furnace (EU 63) shall not exceed 4,160 pounds per hour.

Authority for Requirement: DNR Construction Permit 97-A-659-S6

Reporting & Record keeping:

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

As specified in §63.7753, Keokuk Mills, LLC must keep each record onsite for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report and record. As specified in §63.7745(b), Keokuk Mills, LLC must keep all operation and maintenance plans required by NESHAP Subpart EEEEE for the life of the iron foundry or until the iron foundry is no longer subject to the requirements of NESHAP Subpart EEEEE.

- A. As specified in §63.7740(b), Keokuk Mills, LLC must at all times monitor the relative change in PM loading using a bag leak detection system according requirements in §63.7741(c) and conduct inspections according to the requirements specified in (c)(1) through (8) of §63.7740(c). Requirements of (c)(1) through (8) of §63.7740(c) are specified below:
  - (1) As specified in §63.7740(c)(1), Monitor the pressure drop across each cell of the baghouse associated with EP10 each day to ensure pressure drop is in normal operating range identified in manual.
  - (2) As specified in §63.7740(c)(2), Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.
  - (3) As specified in §63.7740(c)(3), Check compressed air supply for pulse-jet baghouses each day.
  - (4) As specified in §63.7740(c)(4), Monitor cleaning cycles to ensure proper operation using appropriate methodology.
  - (5) As specified in §63.7740(c)(5), Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.
  - (6) As specified in §63.7740(c)(6), Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (knead or bent) or lying on their sides.

- (7) As specified in §63.7740(c)(7), Confirm the physical integrity of the baghouse associated with EP10 through quarterly visual inspections of the baghouse associated with EP9B interior for air leaks.
  - (8) As specified in §63.7740(c)(8), Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.
- B. As specified in §63.7743(c)(2), maintain records of the times the bag leak detection system alarm sounded, and for each valid alarm, the time owner/operator initiate corrective action, the corrective action taken, and the date on which corrective action was completed.
- C. As specified in §63.7743(c)(1), inspect and maintain the baghouse associated with EP33 according to the requirements of §63.7740(c)(1) through (8) and recording all information needed to document conformance with these requirements.
- D. As specified in §63.7744, Keokuk Mills, LLC must maintain records that document continuous compliance with certification requirements in §63.7700(b) or with procedures in scrap selection and inspection plan required in 63.7700(c). Records documenting compliance with the scrap selection and inspection plan must include a copy (kept onsite) of the procedures used by scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.
- E. As specified in 63.7745(a)(2), Record all information needed to document conformance with preventive maintenance plan required by §63.7710(b)(3).
- F. As specified in 63.7745(a)(3), Record all information needed to document conformance with site specific monitoring plan required by §63.7710(b)(4).
- G. As specified in 63.7745(a)(4), Record all information needed to document conformance with corrective action plan required by §63.7710(b)(5).
- H. As specified §63.7752(a), Keokuk Mills, LLC must keep the records specified in paragraphs (a)(1) through (4) of §63.7752(a).
- I. As specified in §63.7752(c), Keokuk Mills, LLC must keep records required by §63.7743, 63.7744, and 63.7745 to show continuous compliance with each emission limitation, work practice standard, and operation and maintenance requirement that applies.

Authority for Requirement: DNR Construction Permit 97-A-659-S6

**Emission Point Characteristics**

*This equipment shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 31.8  
Stack Opening, (inches, dia.): 50  
Exhaust Flow Rate (scfm): 59,000  
Exhaust Temperature (°F): 94  
Discharge Style: Vertical, unobstructed  
Authority for Requirement: DNR Construction Permit 97-A-659-S6

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

**Monitoring Requirements**

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

**Stack Testing:**

Pollutant – PM (federal)  
Stack Test – Once every five (5) years (the last test demonstrated compliance on 7/10/2014. Next test due before 7/10/2019). <sup>(1) (2)</sup>

- <sup>(1)</sup> Performance testing shall be conducted with all of the emission units operating.
- <sup>(2)</sup> As specified in §63.7731, Keokuk Mills, LLC must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emission limitations no less frequently than every five (5) years.

Test Method – 40 CFR 60, Appendix A, Method 5  
Authority for Requirement – DNR Construction Permit 97-A-659-S6

Pollutant – NESHAP Opacity  
Stack Test – Every 6 months <sup>(3)</sup>

- <sup>(3)</sup> Opacity limit is for the building or structure housing any iron and steel foundry emissions source (i.e., not point specific).

Test Method – Opacity – 40 CFR Part 60, Appendix A, Method 9  
Authority for Requirement – DNR Construction Permit 97-A-659-S6

**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: 34**

### Associated Equipment

Associated Emission Unit ID Numbers: 48

Emissions Control Equipment ID Number: CEs 34-1, 34-2, 34-3, and 34-4

Emissions Control Equipment Description: Four (4) Bin Vent Filters

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Emission Unit vented through this Emission Point: 48

Emission Unit Description: New Sand 150 Day Tank

Raw Material/Fuel: Sand

Rated Capacity: 35.62 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of (0%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

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

DNR Construction Permit 97-A-664-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

DNR Construction Permit 97-A-664-S2

#### **Operational Limits & Requirements**

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

#### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (General Provisions; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"

DNR Construction Permit 97-A-664-S2

### Operating Limits

Operating limits for this emission unit shall be:

- A. Each bin vent filter (CEs 34-1, 34-2, 34-3, and 34-4) shall be operated and maintained according to the manufacturer's specifications.

### Reporting and Recordkeeping

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. A log of all maintenance and inspection activities performed on each bin vent filter (CEs 34-1, 34-2, 34-3, and 34-4). This log shall include, but is not necessarily limited to:
- The date and time any inspection and/or maintenance was performed on each bin vent filter (CEs 34-1, 34-2, 34-3, and 34-4);
  - Any issues identified during the inspection;
  - Any issues addressed during the maintenance activities;
  - Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 97-A-664-S2

### Emission Point Characteristics

*There are four (4) identical vents associated with the New Sand 150 Day Tank (EU 48). The combination of vents is considered to make up EP 34 and each vent shall conform to the specifications below.*

Stack Height, (ft, from the ground): 70

Stack Opening, (inches, dia.): 10.4 (each)

Exhaust Flow Rate (scfm): 1,200 (total)

Exhaust Temperature (°F): 70

Discharge Style: Unobstructed vertical

Authority for Requirement: DNR Construction Permit 97-A-664-S2

NOTE: Each vent has its own individual control device which are listed as Bin Vent Filters CEs 34-1, 34-2, 34-3, and 34-4.

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

**Monitoring Requirements**

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

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

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

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

*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 this 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: SCC01 (Internally Vented)**

### Associated Equipment

Associated Emission Unit ID Numbers: SCC01  
Emissions Control Equipment ID Number: SCC01A  
Emissions Control Equipment Description: Cartridge Filters

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Emission Unit vented through this Emission Point: SCC01  
Emission Unit Description: Tumble Blast (70 cu ft)  
Raw Material/Fuel: Shot  
Rated Capacity: 40 lb/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of 0% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

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

DNR Construction Permit 02-A-656-S4

Pollutant: PM<sub>2.5</sub>

Emission Limit(s): 0.51 lb/hr

Authority for Requirement: DNR Construction Permit 02-A-656-S4

Pollutant: PM<sub>10</sub>

Emission Limit(s): 1.03 lb/hr

Authority for Requirement: DNR Construction Permit 02-A-656-S4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf, 1.03 lb/hr

Authority for Requirement: 567 IAC 23.4(6)

DNR Construction Permit 02-A-656-S4

**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 this 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: B2**

### Associated Equipment

Associated Emission Unit ID Numbers: SCC Boiler

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Emission Unit vented through this Emission Point: SCC Boiler

Emission Unit Description: Boiler

Raw Material/Fuel: Natural Gas

Rated Capacity: 12.6 MMBtu/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of an 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).

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

DNR Construction Permit 01-A-233-S2

Pollutant: PM<sub>10</sub>

Emission Limit(s): 1.2 lb/hr

Authority for Requirement: DNR Construction Permit 01-A-233-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu

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

DNR Construction Permit 01-A-233-S2

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 500 ppmv

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

DNR Construction Permit 01-A-233-S2

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)

Emission Limit(s): 9.1 lb/hr

Authority for Requirement: DNR Construction Permit 01-A-233-S2

**Operational Limits & Requirements**

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

NESHAP:

This equipment is of the source category subject to the following federal regulation: *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* [40 CFR Part 63 Subpart DDDDD].

Authority for Requirement: 40 CFR Part 63, Subpart DDDDD  
567 IAC 23.1(4)"dd"

**Operating Limits:**

Operating limits for this emission unit shall be:

A. This emission unit shall operate on natural gas only.

Authority for Requirement: DNR Construction Permit 01-A-233-S2

**Emission Point Characteristics**

*This equipment shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 37.5

Stack Opening, (inches, dia.): 21

Exhaust Flow Rate (scfm): 1,200

Exhaust Temperature (°F): 250

Discharge Style: Vertical, unobstructed

Authority for Requirement: DNR Construction Permit 01-A-233-S2

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

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: (Internally Vented)**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity
08 FUG	16a	Scrap & Charge Handling	Scrap Steel	7.00 tons/hr
57FUG	16b	Scrap & Charge Unloading	Scrap Steel	7.00 tons/hr
24 FUG	45	Casting Grinding	Castings	3.30 tons/hr
	47	Casting Salvage	Castings	1.17 tons/hr

**Applicable Requirements**

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

*The emissions from this equipment shall not exceed the following specified levels.*

Pollutant: Opacity

Emission Limits: 40 %

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

Pollutant: Particulate Matter (PM)

Emission Limits: 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: 51**

### Associated Equipment

Associated Emission Unit ID Numbers: 17  
Emissions Control Equipment ID Number: CE-21  
Emissions Control Equipment Description: Baghouse (BH#4)

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Emission Unit vented through this Emission Point: 17  
Emission Unit Description: Electric Arc Furnace and Canopy Area  
Raw Material/Fuel: Steel Scrap & Castings  
Rated Capacity: 9.5 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> 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).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 06-A-450-S4

Pollutant: NESHAP Opacity

Emission Limit(s): 20% <sup>(2)</sup>

<sup>(2)</sup> Opacity limit from 40 CFR Part 63 Subpart EEEEE 63.7690(a)(7) for the building structure or housing which in this case refers to the canopy. Iowa adoption of National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Subpart EEEEE by reference.

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE  
567 IAC 23.1(4)"de"  
DNR Construction Permit 06-A-450-S4

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.65 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-450-S4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.005 gr/dscf <sup>(3)</sup>

<sup>(3)</sup> Emission limits established in NESHAP Subpart EEEEE for electric arc furnaces as specified in 40 CFR Part 63 Subpart EEEEE 63.7690(a)(1)(i). The facility is required to meet the emission limit for Particulate Matter (PM) or, alternatively the emission limit for total metal HAPs.

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de"

DNR Construction Permit 06-A-450-S4

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 500 ppmv

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

DNR Construction Permit 06-A-450-S4

Pollutant: Total Metal HAP

Emission Limit(s): 0.0004 gr/dscf <sup>(4)</sup>

<sup>(4)</sup> Emission limits established in NESHAP Subpart EEEEE for electric arc furnaces as specified in 40 CFR Part 63 Subpart EEEEE 63.7690(a)(1)(ii). The facility is required to meet the emission limit for Particulate Matter (PM) or, alternatively the emission limit for total metal HAPs.

Authority for Requirement: 40 CFR Part 63 Subpart EEEEE

567 IAC 23.1(4)"de"

DNR Construction Permit 06-A-450-S4

### **Operational Limits & Requirements**

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

#### **NESHAP:**

The Electric Arc Furnace (EU 17) is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart EEEEE-*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries* as specified in 40 CFR Part 63 §63.7681. Except as specified in §63.7683(b), Keokuk Mills, LLC must comply with each emission limitation, work practice standard, and operation and maintenance requirement in Subpart EEEEE that applies to Keokuk Mills, LLC no later than April 23, 2007.

The Electric Arc Furnace (EU 17) is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart A-*General Provisions* as specified in 40 CFR Part 63 §63.7760 (Table 1).

Operating Limits:

Operating limits for this emission unit shall be:

- A. As specified in §63.7700, Keokuk Mills, LLC must comply with the certification requirements in paragraph (b) of §63.7700 or prepare and implement a plan for the selection and inspection of scrap according to the requirements in paragraph (c) of §63.7700.
- B. As specified in §63.7710(b), Keokuk Mills, LLC must prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device an emissions source subject to an emission limit in §63.7690(a). Which includes but is not limited to the following:
  - (1) As specified in §63.7710(b)(3), Preventative maintenance plan for Baghouse associated with EP9B, including a preventative maintenance schedule that is consistent with the manufacturer's instructions and for routine and long-term maintenance.
  - (2) As specified in §63.7710(b)(4), A site-specific monitoring plan for each bag leak detection system. The owner and operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan must address all the items identified in paragraphs (b)(4)(i) through (v) of §63.7710(b)(4).
  - (3) As specified in §63.7710(b)(5), Corrective action plan for Baghouse associated with EP9B. The plan must include the requirement that, in event a bag leak detection system alarm is triggered, Keokuk Mills, LLC must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon practicable.
- C. As specified in §63.7741(b), Keokuk Mills, LLC must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (b)(1) through (7) of §63.7741(b).

Authority for Requirement: DNR Construction Permit 06-A-450-S4

Reporting and Recordkeeping:

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

As specified in §63.7753, Keokuk Mills, LLC must keep each record onsite for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report and record. As specified in §63.7745(b), Keokuk Mills, LLC must keep all operation and maintenance plans required by NESHAP Subpart EEEEE for the life of the iron foundry or until the iron foundry is no longer subject to the requirements of NESHAP Subpart EEEEE.

- A. As specified in §63.7740(c), Keokuk Mills, LLC must at all times monitor the relative change in PM loading using a bag leak detection system according requirements in §63.7741(c) and conduct inspections according to the requirements specified in (c)(1) through (8) of §63.7740(c). Requirements of (c)(1) through (8) of §63.7740(b) are specified below:
  - (1) As specified in §63.7740(c)(1), Monitor the pressure drop across each cell of Baghouse

associated with EP9B each day to ensure pressure drop is in normal operating range identified in manual.

- (2) As specified in §63.7740(c)(2), Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.
  - (3) As specified in §63.7740(c)(3), Check compressed air supply for pulse-jet baghouses each day.
  - (4) As specified in §63.7740(c)(4), Monitor cleaning cycles to ensure proper operation using appropriate methodology.
  - (5) As specified in §63.7740(c)(5), Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.
  - (6) As specified in §63.7740(c)(6), Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (knead or bent) or lying on their sides.
  - (7) As specified in §63.7740(c)(7), Confirm the physical integrity of Baghouse associated with EP9B through quarterly visual inspections of Baghouse associated with EP9B interior for air leaks.
  - (8) As specified in §63.7740(c)(8), Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.
- B. As specified in §63.7743(c)(2), maintain records of the times the bag leak detection system alarm sounded, and for each valid alarm, the time owner/operator initiate corrective action, the corrective action taken, and the date on which corrective action was completed.
- C. As specified in §63.7743(c)(1), inspect and maintain Baghouse associated with EP51 according to the requirements of §63.7740(c)(1) through (8) and recording all information needed to document conformance with these requirements.
- D. As specified in §63.7744, Keokuk Mills, LLC must maintain records that document continuous compliance with certification requirements in §63.7700(b) or with procedures in scrap selection and inspection plan required in 63.7700(c). Records documenting compliance with the scrap selection and inspection plan must include a copy (kept onsite) of the procedures used by scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.
- E. As specified in 63.7745(a)(2), Record all information needed to document conformance with preventive maintenance plan required by §63.7710(b)(3).
- F. As specified in 63.7745(a)(3), Record all information needed to document conformance with site specific monitoring plan required by §63.7710(b)(4).
- G. As specified in 63.7745(a)(4), Record all information needed to document conformance with corrective action plan required by §63.7710(b)(5).
- H. As specified §63.7752(a), Keokuk Mills, LLC must keep the records specified in paragraphs (a)(1) through (4) of §63.7752(a).

- I. As specified in §63.7752(c), Keokuk Mills, LLC must keep records required by §§63.7743, 63.7744, and 63.7745 to show continuous compliance with each emission limitation, work practice standard, and operation and maintenance requirement that applies.

Authority for Requirement: DNR Construction Permit 06-A-450-S4

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 60.4

Stack Opening, (inches, dia.): 48

Exhaust Flow Rate (scfm): 15,200

Exhaust Temperature (°F): 96

Discharge Style: Vertical, unobstructed

Authority for Requirement: DNR Construction Permit 06-A-450-S4

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

**Monitoring Requirements**

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

**Stack Testing:**

Pollutant – PM (federal)

Stack Test – Once every five (5) years (the last test demonstrated compliance on 8/1/2012. Next test due before 8/1/2017). <sup>(1)(2)(3)</sup>

Test Method – 40 CFR 60, Appendix A, Method 5

Authority for Requirement – DNR Construction Permit 06-A-450-S4

Pollutant – NESHAP Opacity

Stack Test – Every 6 months <sup>(3)</sup>

Test Method – Opacity – 40 CFR Part 60, Appendix A, Method 9

Authority for Requirement – DNR Construction Permit 06-A-450-S4

Pollutant – Total Metal HAP

Stack Test – Once every five (5) years <sup>(1)(2)(3)</sup>

Test Method – Opacity – 40 CFR 60, Appendix A, Method 29

Authority for Requirement – DNR Construction Permit 06-A-450-S4

(1) As required by §63.7(a)(2), Keokuk Mills, LLC must conduct a performance test no later than 180 calendar days after compliance date this is specified in §63.7683 to demonstrate initial compliance with the applicable PM or total metal HAP that applies to the Electric Arc Furnace (EU17).

(2) As specified in §63.7731, Keokuk Mills, LLC must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emission limitations no less frequently than every five (5) years.

(3) These tests shall be completed within 180 days of the startup of the new baghouse (EP51). Stack testing shall be completed for EP9B and EP51 simultaneously. Stack testing completed on October 19, 2007, demonstrated compliance with the permitted emission limits and satisfies the requirements for an initial compliance demonstration. As always, the Department can require stack testing to show compliance with permit and other types of limits.

**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: 52i (Internally Vented)**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
52i	22	Small Shakeout	Reclaim Sand	15 tons/hr	CE-GIW: Baghouse
	28	GIW East	Sand	30 tons/hr	
	29	GIW West	Sand	30 tons/hr	

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 11-A-285-S1

Pollutant: PM<sub>10</sub>

Emission Limit(s): 3.29 lb/hr

Authority for Requirement: DNR Construction Permit 11-A-285-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 11-A-285-S1

**Operational Limits & Requirements**

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Operating Limits:

Operating limits for this emission unit shall be:

- A. The total sand throughput for the emission units (EUs 22, 28, and 29) shall not exceed 25,000 lbs of sand per hour.
- B. The baghouse (CE GIW) shall be operated and maintained according to the manufacturer's specifications.
- C. Per 567 IAC 33.3(18)"f"(1), prior to beginning actual construction of the projects (Project Numbers 08-345 & 08-641) the owner or operator shall document:
  - (1) A description of the projects (Project Numbers 08-345 & 08-641),
  - (2) Identification of the emission unit(s) whose emissions of a regulated NSR pollutant could be affected by the projects (Project Number 08-345 & 08-641), and
  - (3) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions (BAE), the projected actual emissions (PAE), the amount of emissions excluded under paragraph "3" of the definition of "*projected actual emissions*" in subrule 33.3(1), an explanation describing why such amount was excluded, and any netting analysis if applicable.
- D. Per 567 IAC 33.3(18)"f"(4), the owner or operator shall:
  - (1) Monitor the emission of any regulated NSR pollutant that could increase as a result of the project that is emitted by any emissions unit identified in Condition C.(2) shown above.
  - (2) Calculate the annual emissions, in tons per year on a calendar-year basis, for a period of ten (10) years following resumption of regular operations and maintain a record of regular operations after the change.
  - (3) Per 567 IAC 33.3(18)"g", the owner or operator shall make the information required to be documented and maintained pursuant to 567 IAC 33.3(18)"f" available for review upon request for inspection by the Department or the general public pursuant to the requirements for Title V operating permits contained in 567 IAC 22.107(6).

Authority for Requirement: DNR Construction Permit 11-A-285-S1

Reporting & Record keeping:

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. At the end of each working day:
  - Record the total amount of sand processed over the previous day by EUs 22, 28, and 29 and
  - Record the number of hours EUs 22, 28, and 29 processed sand over the previous working day.
- B. Within seven (7) days of the end of each month, calculate and record the daily average hourly production rate for EUs 22, 28, and 29 for each day over the previous month by dividing the amount of sand processed on a given day by the number of hours the equipment operated on that given day.

- C. A log of all maintenance and inspection activities performed on the baghouse (CE GIW). This log shall include, but is not necessarily limited to:
- The date and time any inspection and/or maintenance was performed on the baghouse (CE GIW);
  - Any issues identified during the inspection;
  - Any issues addressed during the maintenance activities;
  - Identification of the staff member performing the maintenance or inspection.
- D. Per 567 IAC 33.3(18)"f"(1), the owner or operator shall maintain a record of the information required in Condition 14.C. of this permit.
- E. Per 567 IAC 33.3(18)"f"(4) and 567 IAC 33.3(18)"f"(5), the owner or operator shall maintain a record containing the information required in Condition 14.D. of this permit and that record shall be retained by the owner or operator for a period of ten (10) years after the projects (Project Number 08-345 & 08-641) are completed.

Authority for Requirement: DNR Construction Permit 11-A-285-S1

**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)

## **CAM Plan for CE GIW Baghouse**

*This emission point shall conform to the conditions listed below.*

### 1. Background

#### A. Emission Unit:

Facility: Keokuk Mills, LLC

Description: Small Shakeout, GIW East, GIW West

Emission Point Identification Number: EP-52i

Emission Unit Identification Numbers: EU-22, EU-28, & EU-29

Control Device Identification Number: CE-GIW

#### B. Applicable Regulations, Emission Limits, and Monitoring Requirements:

Regulation No.: 567 IAC 23.3(2)"d"

567 IAC 23.4(6)

DNR Construction Permit 11-A-285-S1

Opacity Emission Limit: 40%

PM<sub>10</sub> Emission Limit: 3.29 lb/hr

Particulate Emission Limit: 0.05 gr/dscf

Current Monitoring Requirement: Daily pressure drop across baghouse  
Weekly opacity

#### C. Control Technology:

Baghouse

### 2. Monitoring Approach

The key elements of the monitoring approach are presented in Table A. The selected performance indicators are baghouse differential pressure and visible emissions.

**Table A—Monitoring Approach**

Applicable Requirements	PM Limits	Opacity
General Monitoring Approach	Pressure drop readings	Visible emissions observations
Daily	Check dust collector differential pressure.	
Weekly		Where applicable, visible emissions observations via Method 22 are performed weekly to ensure no visible emissions during the material handling operation of this unit. shall be observed on a weekly

		<p>basis to ensure no visible emissions during the material handling operation of the unit.</p> <p>If visible emissions are observed this would be an exceedance not a violation and action will be taken as soon as possible, but no later than eight hours. If weather conditions prevent the observer from conducting an observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake readings at approximately two-hour intervals throughout the day. If unsuccessful that day due to weather, an observation shall be made the following day the unit operates.</p> <p>Maintain a written record of the observation and any action resulting from the observation.</p>
Quarterly	<p>Inspect bags for leaks and wear.</p> <p>If leaks or abnormal conditions are detected, the appropriate measures for remediation will be implemented within eight hours. Bag replacement should be documented by identifying the date, time and location of the bag.</p> <p>Maintain a written record of the inspection and any action resulting from the inspection.</p>	
Semi-annually	<p>All baghouse components are inspected every six months to insure proper operation.</p> <p>If leaks or abnormal conditions are detected the appropriate measures for remediation will be implemented within eight hours.</p> <p>Maintain a written record of the inspection and any action resulting from the inspection.</p>	
Indicator Range/Source	Normal Operating Pressure Range: 2 to 6 inches H <sub>2</sub> O.	Presence of visible emissions.
Data Collection Frequency	<p>Daily: Pressure range observations.</p> <p>Quarterly and Semiannually: Equipment inspections.</p>	<p>Weekly: Visible emissions observations.</p> <p>Quarterly and Semiannually: Equipment inspections.</p>

Recordkeeping	<p>Daily logs of pressure readings.</p> <p>Weekly logs of emissions observations readings.</p> <p>All daily, monthly, quarterly, and semi-annually required inspections and maintenance. The date, time, and the location of the bag in relationship to the other bags must document bag replacement.</p> <p>All corrective actions resulting from compliance indicators and inspections and maintenance.</p> <p>Excursion, indicator opacity exceedance, and excess emissions reports.</p> <p>Maintenance and inspection records will be kept for at least five (5) years and be available to the IDNR upon request.</p>
Quality Control	<p>The baghouse and monitoring equipment will be operated and maintained according to the manufacturer's recommendations and/or as outlined in the above monitoring requirements.</p> <p>Keokuk Mills, LLC will maintain an adequate inventory of spare parts.</p> <p>Visible emissions observer trained per Method 22.</p>

### 3. Justification

#### A. Background

The emission units included in this CAM plan were determined to be subject to CAM, since the emission units meet the three CAM applicability criteria listed in 40 CFR 64. This CAM plan details the compliance assurance monitoring that will be performed on the control devices.

#### B. Rational for Selection of Performance Indicator

The daily pressure drop readings were selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the particulate emission standard. A pressure drop out of the normal operating range would indicate a reduced performance for the baghouse. Therefore, the detection of excessive or insufficient pressure drop is used as a performance indicator.

#### C. Rational for Selection of Indicator Level

If a pressure drop outside the values noted above is observed, corrective action will be taken within 8-hours. If the baghouse is operating properly, there will not be a pressure drop outside the normal range except during start up, shut down, and upset conditions.

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 53i (Internally Vented)**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
53i	03	Sand Heater	New Sand	20 tons/hr	None

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 15-A-524

Pollutant: PM<sub>2.5</sub>

Emission Limit(s): 0.25 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-524

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.80 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-524

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 15-A-524

**Operational Limits & Requirements**

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 15-A-524

**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: 54i (Internally Vented)**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
54i	04	Sand Heater	New Sand	20 tons/hr	None

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 15-A-525

Pollutant: PM<sub>2.5</sub>

Emission Limit(s): 0.25 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-525

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.80 lb/hr

Authority for Requirement: DNR Construction Permit 15-A-525

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 15-A-525

**Operational Limits & Requirements**

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (General Provisions; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 15-A-525

**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: 56**

<b>EP</b>	<b>EU</b>	<b>EU Description</b>	<b>Raw Material/ Fuel</b>	<b>Rated Capacity</b>	<b>CE ID &amp; Description</b>
56	15	Core Per-Mix	Resin & Catalyst	289.3 lb/hr	None

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 15-A-523

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 15-A-523

**Operational Limits & Requirements**

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 15-A-523

**Emission Point Characteristics**

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

Stack Height, (ft, from the ground): 12  
Stack Opening, (inches, dia.): 24  
Exhaust Flow Rate (scfm): Displacement  
Exhaust Temperature (°F): 70  
Discharge Style: Horizontal  
Authority for Requirement: DNR Construction Permit 15-A-523

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

**Monitoring Requirements**

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

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 58i (Internally Vented)**

<b>EP</b>	<b>EU</b>	<b>EU Description</b>	<b>Raw Material/ Fuel</b>	<b>Rated Capacity</b>	<b>CE ID &amp; Description</b>
58i	07a and 07b	Two (2) Mold Mixers	Sand/Resin	10 tons/hr each	None

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 15-A-526

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.05 gr/dscf

Authority for Requirement: 567 IAC 23.4(6)  
DNR Construction Permit 15-A-526

**Operational Limits & Requirements**

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 15-A-526

**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: 59i (Internally Vented)**

EP	EU	EU Description	Raw Material/ Fuel	Rated Capacity	CE ID & Description
59i	20	Ladle Preheat	Natural Gas	0.0177 MMcf	None

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

<sup>(1)</sup> An exceedance of the indicator opacity of “no visible emissions (No VE)” will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: 567 IAC 23.3(2)"d"  
DNR Construction Permit 15-A-527

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"  
DNR Construction Permit 15-A-527

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"  
DNR Construction Permit 15-A-527

**Operational Limits & Requirements**

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

This facility (plant number 56-01-025) is subject to Subparts A (*General Provisions*; 40 CFR §63.1 – 40 CFR §63.15) and EEEEE (*National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries*; 40 CFR §63.7680 – 40 CFR §63.7765) of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(4)"de"  
DNR Construction Permit 15-A-527

Operating Limits

Operating limits for this emission unit shall be:

A. This emission unit shall only combust natural gas.

**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: 106**

### Associated Equipment

Associated Emission Unit ID Number: 106

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Emission Unit vented through this Emission Point: 106

Emission Unit Description: Emergency Diesel Engine—Sprinkler System Pump

Raw Material/Fuel: Diesel Fuel

Rated Capacity: 208 bhp

### **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/dscf

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

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

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

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

Reporting & Record keeping:

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

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

Authority for Requirement: 567 IAC 22.108(3)

### NESHAP:

This emission unit is an affected reciprocating internal combustion engines that is subject to 40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 63.6590(a)(1)(ii) this is an existing CI stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart ZZZZ. Below is a general outline of requirements for this subpart. For a full explanation of all requirements and to view the subpart in its entirety, please refer to the web link in Appendix A.

### Compliance Date

Per 63.6595 you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

### Operating Conditions 40 CFR 63.6602

1. Change oil and filter every 500 hours of operation or annually, whichever comes first.<sup>(1)</sup>
  - <sup>(1)</sup> Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.
2. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first.
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<sup>(2)</sup>
  - <sup>(2)</sup> Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices

### Maintenance Requirements 40 CFR 63.6625

1. Must operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or develop and follow 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.
2. If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.
3. You must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.<sup>(1)</sup>
  - <sup>(1)</sup> Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices

4. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c to Subpart ZZZZ of Part 63, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

Operating Limits 40 CFR 63.6640(f)

1. In order for the engine to be considered emergency stationary RICE, other than emergency operation, maintenance and testing, and operation in non-emergency situations for more than 50 hours per year is prohibited.
2. There is no time limit on the use of emergency stationary RICE in emergency situations.
3. Maintenance and readiness checks are limited to 100 hours per year.
4. You may operate your emergency stationary RICE up to 50 hours per year for non-emergency situations, but those 50 hours are counted toward the 100 hours of maintenance and testing. See 40 CFR 63.6640(f)(4) for additional information.

Reports & Records

See 40 CFR 63.6650 and 63.6655 for a complete list and description.  
An initial notification is not required per 40 CFR 63.6645(a)(5)

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

**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) 725-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

#### **G14. Excess Emissions and Excess Emissions Reporting Requirements**

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

## 2. Excess Emissions Reporting

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

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

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required initial reports to the department

within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

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

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

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

#### **G15. Permit Deviation Reporting Requirements**

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

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

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of

performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

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

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

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

*567 IAC 22.110(1)*

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

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

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

#### **G18. Duty to Modify a Title V Permit**

##### 1. Administrative Amendment.

- a. An administrative permit amendment is a permit revision that does any of the following:
  - i. Correct typographical errors
  - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - iii. Require more frequent monitoring or reporting by the permittee; or
  - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
- b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
- c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

##### 2. Minor Title V Permit Modification.

- a. Minor Title V permit modification procedures may be used only for those permit modifications that satisfy all of the following:
  - i. Do not violate any applicable requirement;
  - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit;
  - iii. Do not require or change a case by case determination of an emission limitation or other standard, or an increment analysis;
  - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act;
  - v. Are not modifications under any provision of Title I of the Act; and
  - vi. Are not required to be processed as significant modification under rule 567 - 22.113(455B).

- b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
- i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
  - ii. The permittee's suggested draft permit;
  - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
  - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
- c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

### 3. Significant Title V Permit Modification.

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

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

#### **G19. Duty to Obtain Construction Permits**

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

#### **G20. Asbestos**

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

## **G21. Open Burning**

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

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

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

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

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
  - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
  - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air

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

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

#### **G24. Permit Reopenings**

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

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

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

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

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

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

a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;

b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the

permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

### **G25. Permit Shield**

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

### **G26. Severability**

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

### **G27. Property Rights**

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

### **G28. Transferability**

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

### **G29. Disclaimer**

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

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

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

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

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

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

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

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

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

*567 IAC 26.1(1)*

### **G32. Contacts List**

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

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

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

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

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

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

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

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

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

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

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

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

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

## **IV. Appendix A**

Internet Link: 40 CFR, Subpart A—General Provisions: [http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr63\\_main\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr63_main_02.tpl)

Internet Link: 40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr;rgn=div6;view=text;node=40%3A14.0.1.1.1.1;idno=40;sid=e94dcfde4a04b27290c445a56e635e58;cc=ecfr>

Internet Link: 40 CFR 63, Subpart EEEEE—National Emission Standards for Iron and Steel Foundries: <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr;sid=547e5a5a43a490ef2545903ef0a2729b;rgn=div6;view=text;node=40%3A14.0.1.1.1.6;idno=40;cc=ecfr>

Internet Link: 40 CFR 63, Subpart DDDDD— National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters: <http://www.ecfr.gov/cgi-bin/text-idx?node=sp40.14.63.ddddd>