

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

July 1, 2016

PERMIT TO INSTALL
199-14A

ISSUED TO
Brembo North America, Inc.

LOCATED AT
Van Wert Road and M-60
Albion Township, Michigan

IN THE COUNTY OF
Calhoun

STATE REGISTRATION NUMBER
N6226

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: April 6, 2016	
DATE PERMIT TO INSTALL APPROVED: July 1, 2016	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUCHRGHNDLG	Charge handling within the foundry building. All charge handling activities are enclosed and the emissions are vented internally.	4/28/2016	FGMELTING
EUCHARGING	Charging includes the loading scrap metal and alloying materials in to the electric induction furnaces. The charging emissions are vented internally.	4/28/2016	FGMELTING FGMACTEEEEEE
EUINDUCTION1	An electric induction melting furnace rated at 13.2 tons of grey iron charge. The emissions from melting will be captured and controlled by the Melt Shop Baghouse.	4/28/2016	FGMELTING FGMACTEEEEEE
EUINDUCTION2	An electric induction melting furnace rated at 13.2 tons of grey iron charge. The emissions from melting will be captured and controlled by the Melt Shop Baghouse.	4/28/2016	FGMELTING FGMACTEEEEEE
EUINDUCTION3	An electric induction melting furnace rated at 13.2 tons of grey iron charge. The emissions from melting will be captured and controlled by the Melt Shop Baghouse.	4/28/2016	FGMELTING FGMACTEEEEEE
EUINDUCTION4	An electric induction melting furnace rated at 13.2 tons of grey iron charge. The emissions from melting will be captured and controlled by the Melt Shop Baghouse.	4/28/2016	FGMELTING FGMACTEEEEEE
EUPOURING	Pouring is done by introducing the molten metal into the molds. The emissions from pouring are controlled by the Pouring and Cooling Baghouse and a Regenerative Thermal Oxidizer.	4/28/2016	FGPOURCOOL FGMACTEEEEEE
EUCOOLING	Molds are conveyed to the cooling house after pouring, the cooling house is a fully enclosed process. The emissions from cooling are controlled by the Pouring and Cooling Baghouse and a Regenerative Thermal Oxidizer.	4/28/2016	FGPOURCOOL FGMACTEEEEEE
EUSHAKEOUT	During shakeout the metal is removed from the sand mold using a rotating drum system. The emissions from shakeout are controlled by the Sand System Baghouse.	4/28/2016	FGSANDHNDLG FGMACTEEEEEE
EUFINISHING	Finishing includes the grinding and shot blasting of cooled iron castings. The emissions from finishing are controlled by the Finishing Baghouse.	4/28/2016	NA
EUNATGAS	Natural gas fired process/building heat and the operation of the RTO.	4/28/2016	NA

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUCOREMIX	Core production and storage which includes the mixing of core sand with resins and other additives. The emissions from EUCOREMIX are vented internally.	4/28/2016	FGMACTEEEEEE
EUCOREMAKING	Core making includes curing the formed core sand mixture using a non-HAP amine catalyst. The emissions from EUCOREMAKING are controlled by an acid scrubber.	4/28/2016	FGMACTEEEEEE
EUSANDHNDLG	Sand handling includes all green sand processing. The activities include mixing of green sand ingredients (sand, seacoal, lignite, etc.) and handling of the molds after the grey iron has cooled. The emissions from core production and storage will be controlled by the Sand System Baghouse.	4/28/2016	FGSANDHNDLG
EUSILOS	Storage silo for sand materials. Four 150 ton new sand silos and three 200 ton return sand storage silos. The silos are located in the building and are completely enclosed. The silos are included as part of the sand handling system and the emissions are not vented externally.	4/28/2016	FGSANDHNDLG
EUENGINE1	A 1,250 kW diesel fired emergency generator, manufactured in model year 2007 or later and a displacement of less than 10 liters/cylinder.	4/28/2016	NA
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to:
EUSHAKEOUT

DESCRIPTION: During shakeout the metal is removed from the sand mold using a rotating drum system. The emissions from shakeout are controlled by the Sand System Baghouse.

Flexible Group ID: FGMACTEEEEEE

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. CO	11.6 pph	Test Protocol*	EUSHAKEOUT	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
2. CO	38.96 tpy	12-month rolling time period as determined at the end of each calendar month.	EUSHAKEOUT	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
3. VOC	3.19 pph	Test Protocol*	EUSHAKEOUT	SC V.1	R 336.1205(1)(a) & (3), R 336.1702(a)
4. VOC	10.72 tpy	12-month rolling time period as determined at the end of each calendar month.	EUSHAKEOUT	SC VI.2	R 336.1205(1)(a) & (3), R 336.1702(a)

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUSHAKEOUT unless the sand system capture system and baghouse are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall not operate EUSHAKEOUT unless a bag leak detection system for the sand system baghouse is installed, maintained and operated in a satisfactory manner. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. No later than October 24, 2016, the permittee shall verify CO and VOC emission rates from EUSHAKEOUT by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d))**
2. The permittee shall calculate monthly and 12-month rolling time period CO and VOC emissions for EUSHAKEOUT. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
3. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331(c))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVSSBH	96	85	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUFINISHING

DESCRIPTION: Finishing includes the grinding and shot blasting of cooled iron castings. The emissions from finishing are controlled by the Finishing Baghouse.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	13.6 tpy	12-month rolling time period as determined at the end of each calendar month.	EUFINISHING	SC VI.2	R 336.1301, R 336.1331
2. PM10	0.64 pph	Test Protocol*	EUFINISHING	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
3. PM10	1.36 tpy	12-month rolling time period as determined at the end of each calendar month.	EUFINISHING	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
4. PM2.5	0.06 pph	Test Protocol*	EUFINISHING	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
5. PM2.5	0.14 tpy	12-month rolling time period as determined at the end of each calendar month.	EUFINISHING	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Metal finished	100,000 tpy	12-month rolling time period as determined at the end of each calendar month.	EUFINISHING	SC VI.3	R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUFINISHING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the baghouse, has been submitted within 60 days of installation, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUFINISHING unless the finishing capture system and baghouse are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall not operate EUFINISHING unless a bag leak detection system for the finishing baghouse is installed, maintained and operated in a satisfactory manner. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Upon request of the AQD District Supervisor, the permittee may be required to verify PM10 and PM2.5 emission rates from EUFINISHING by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall calculate monthly and 12-month rolling time period PM, PM10, and PM2.5 emissions for EUFINISHING. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
3. The permittee shall monitor and record the amount of metal finished on a monthly and 12-month rolling time period basis for EUFINISHING. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
4. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331(c))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVFINISHING	44	85	R 336.1225, 40 CFR 52.21(c) &(d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUNATGAS

DESCRIPTION: Natural gas fired process/building heat and the operation of the RTO.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Natural gas usage	192 MMSCF per year	12-month rolling time period as determined at the end of each calendar month.	EUNATGAS	SC VI.2	R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), R 336.1225)**
2. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage rate in MMSCF for EUNATGAS on a monthly and 12-month rolling time period basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUCOREMIX

DESCRIPTION: Core production and storage which includes the mixing of core sand with resins and other additives. The emissions from EUCOREMIX are vented internally.

Flexible Group ID: FGMACTEEEEEE

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	6.44 tpy	12-month rolling time period as determined at the end of each calendar month	EUCOREMIX	SC VI.2	R 336.1205(1)(a) & (3), R 336.1702(a)

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Core Sand Usage	19,800 tpy	12-month rolling time period as determined at the end of each calendar month.	EUCOREMIX	SC VI.3	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall calculate monthly and 12-month rolling time period VOC emissions for EUCOREMIX. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
3. The permittee shall monitor and record the core sand usage rate for EUCOREMIX on a monthly and 12-month rolling time period basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
4. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331(c))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUCOREMAKING

DESCRIPTION: Core making includes curing the formed core sand mixture using dimethylisopropylamine (DMIPA), a non-HAP amine catalyst. The emissions from EUCOREMAKING are controlled by an acid scrubber.

Flexible Group ID: FGMACTEEEE

POLLUTION CONTROL EQUIPMENT: Acid Scrubber

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	0.11 tpy	12-month rolling time period as determined at the end of each calendar month.	EUCOREMAKING	SC VI.2	R 336.1205(1)(a) & (3), R 336.1702(a)
*Test Protocol shall specify averaging time.					

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Core Sand Usage	19,800 tpy	12-month rolling time period as determined at the end of each calendar month.	EUCOREMAKING	SC VI.3	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a)
2. Catalyst Usage	11 tpy	12-month rolling time period as determined at the end of each calendar month.	EUCOREMAKING	SC VI.3	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

- The permittee shall not operate EUCOREMAKING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the acid scrubber, has been submitted within 60 days of installation, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
- The permittee shall only use a DMIPA catalyst for EUCOREMAKING. **(R336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUCOREMAKING unless the capture system and acid scrubber are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the liquid flow rate, pressure drop, and pH of the acid scrubber from EUCOREMAKING on a continuous basis. The permittee shall maintain the scrubber liquid flow rate at or above the rate determined at the most recent performance test. The MAP as required in SC III.1 shall include a quality assurance plan stating the method proposed to calibrate/audit the monitors, per manufacturer recommendations, in order to verify that the monitoring equipment has been installed and is operating properly. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702)**
3. The permittee shall perform and record results of the inspections of the packed bed scrubber system as follows:
 - a. If the pressure drop across the control varies by more than ± 1 inch of water gauge, from the pressure drop determined during compliance testing, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.
 - b. Visually inspect the packed bed scrubber, on a quarterly basis, to ensure there is proper drainage and no evidence of chemical attack on the structural integrity of the control device and record the results of the quarterly inspection.
 - c. Visually inspect ductwork from tanks to the packed bed scrubber, on a quarterly basis, to ensure there are no leaks and record the results of the quarterly inspection. **(R 336.1224, R 336.1225, R 336.1910)**
4. The permittee shall use fresh water for any make-up water, and shall supply this water to the unit at the top of the packed bed scrubber. **(R 336.1224, R 336.1225, R 336.1910)**
5. The permittee shall maintain a pH below 4.5 S.U. during scrubber operation. **(R 336.1224, R 336.1225, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall calculate monthly and 12-month rolling time period VOC emissions for EUCOREMAKING. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
3. The permittee shall monitor and record the core sand usage rate and catalyst usage rate for EUCOREMAKING on a monthly and 12-month rolling time period basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
4. The permittee shall monitor and record the DMIPA catalyst usage rate on a monthly, and 12-month rolling time period basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

5. The permittee shall monitor and record the acid scrubber liquid flow rate, pressure drop, and pH on a continuous basis and keep records of the monitor calibrations as required by SC IV.2. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
6. The permittee shall maintain inspection records for the scrubber. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
7. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331(c))**
8. The permittee shall maintain records of the DMIPA composition used for EUCOREMAKING in the form of a MSDS or equivalent. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVSCRBR	33 ¹	78 ¹	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to:
EUENGINE1

DESCRIPTION: A 1,250 kW diesel fired emergency generator, manufactured in model year 2007 or later and a displacement of less than 10 liters/cylinder.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Non-methane hydrocarbon (NMHC) + NO _x	6.4 g/kW-hr	Test Protocol*	EUENGINE1	SC V.1 SC VI.2	40 CFR 60.4205(b), 60.4202(a), Table 1 of 40 CFR 89.112
2. CO	3.5 g/kW-hr	Test Protocol*	EUENGINE1	SC V.1 SC VI.2	40 CFR 60.4205(b), 60.4202(a), Table 1 of 40 CFR 89.112
3. PM	0.20 g/kW-hr	Test Protocol*	EUENGINE1	SC V.1 SC VI.2	40 CFR 60.4205(b), 60.4202(a), Table 1 of 40 CFR 89.112
4. PM10	0.0975 pph	Test Protocol*	EUENGINE1	SC V.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
5. PM2.5	0.0975 pph	Test Protocol*	EUENGINE1	SC V.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
*Test Protocol shall determine averaging time.					

6. If the permittee installs a variable speed engine, then the visible emissions from EUENGINE1 shall not exceed 15 percent opacity during lugging mode. This limit is based on the federal Standards of Performance for New Stationary Sources, 40 CFR Part 60 Subparts A and IIII which reference requirements in 40 CFR Part 89. At all other times, EUENGINE1 shall not exceed 20 percent opacity. **(R 336.1301, 40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), 40 CFR 89.113)**

II. MATERIAL LIMITS

1. The permittee shall burn only diesel fuel, in EUENGINE1 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (3), R 336.1402(1), 40 CFR 60.4207, 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUENGINE1 for more than 104 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 104 hours includes the hours for the purpose of emergency operation, necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. When conducting maintenance and readiness testing, the permittee shall not operate EUENGINE1 for more than 2-hours in a 24-hour period. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
3. The permittee may operate EUENGINE1 for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. EUENGINE1 may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f))**
4. If EUENGINE1 is a certified engine, the permittee shall meet the following requirements:
 - a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions;
 - b. Change only those emission-related settings that are permitted by the manufacturer; and
 - c. Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as they apply to EUENGINE1.

If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine may be considered a non-certified engine. **(40 CFR 60.4211(a) & (b))**

5. If EUENGINE1 is a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan and records of conducted maintenance for EUENGINE1 and must, to the extent practicable, maintain and operate EUENGINE1 in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(3))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain EUENGINE1 with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4209)**
2. The nameplate capacity of EUENGINE1 shall not exceed 1,250 kW, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), 40 CFR 60.4202, 40 CFR 89.112(a), R 336.1225)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Unless EUENGINE1 has been certified by the manufacturer as required by 40 CFR Part 60 Subpart IIII and the permittee maintains the engine as required by 40 CFR 60.4211, the permittee shall conduct an initial performance test to demonstrate compliance with the emission limits in SC I.1 – I.3 for EUENGINE1, within one year after startup, or within 1 year after EUENGINE1 is no longer configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer, to demonstrate compliance with the emission limits in 40 CFR 60.4205(b). If a performance test is required, the performance test shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. After conducting the initial performance test, the permittee shall conduct subsequent performance testing, for non-certified engines, every 8,760 hours or 3 years, whichever comes first. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4211(g)(3), 40 CFR 60.4212)**
2. Upon request of the AQD District Supervisor, the permittee may be required to verify PM10 and PM2.5 emission rates in SC I.4 – I.6 from EUENGINE1 by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit Supervisor and District Supervisor. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that EUENGINE1 meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If EUENGINE1 becomes uncertified then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211(g)(3))**
3. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUENGINE1, on a 24-hour, monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall document how many hours are spent for emergency operation of EUENGINE1, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (3), 40 CFR 60.4211, 40 CFR 60.4214)**
4. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUENGINE1, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b). The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(R 336.1205(1)(a) & (3), R 336.1402(1), 40 CFR 80.510(b))**

5. The permittee shall monitor and record, in a satisfactory manner, the diesel fuel usage rate for EUENGINE1 on a monthly and 12-month rolling time period basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUENGINE1. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether EUENGINE1 will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(40 CFR Part 60 Subpart IIII)**
3. If EUENGINE1 operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f), you must submit an annual report containing the information below:
 - a. Company name and address where the engine is located.
 - b. Date of the report and beginning and ending dates of the reporting period.
 - c. Engine site rating and model year.
 - d. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - e. Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).
 - f. Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).
 - g. Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4. **(40 CFR 60.4211)**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVENGINE1	18	60	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart IIII, as they apply to EUENGINE1. **(40 CFR Part 60 Subparts A & IIII)**
2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR, Part 63, Subpart A and Subpart ZZZZ, as they apply to EUENGINE1. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMELTING	This flexible group includes scrap charging and 4 electric induction melting furnaces. The four melting furnaces are controlled by a common baghouse.	EUCHARGHNDLG, EUCHARGING, EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, EUINDUCTION4
FGPOURCOOL	This flexible group includes the pouring and cooling operations at the facility. The emission units in this flexible group are controlled by a common baghouse and RTO.	EUPOURING, EUCOOLING
FGSANDHNDLG	This flexible group includes the shakeout activities, core mix activities, and the sand handling activities (including the storage silos) at the facility. The shakeout and sand handling activities are controlled by a common baghouse.	EUSHAKEOUT, EUSANDHNDLG, EUSILOS
FGMACTEEEEEE	The affected source is a new or existing iron and steel foundry, that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. A new affected source is a source that commences construction or reconstruction on or after December 23, 2002. The regulations cover emissions from metal melting furnaces, scrap preheaters, new pouring areas, pouring stations, new automated conveyor and new pallet cooling lines, new automated shakeout lines, mold and core making lines, and fugitive emissions from foundry operations.	EUCHARGING, EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, EUINDUCTION4, EUPOURING, EUCOOLING, EUSHAKEOUT, EUCOREMIX, EUCOREMAKING

The following conditions apply to:
FGMELTING

DESCRIPTION: This flexible group includes scrap handling, charging and 4 electric induction melting furnaces. The four melting furnaces are controlled by a common baghouse.

Emission Units: EUCHARGEHNDLG, EUCHARGING, EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, EUINDUCTION4

POLLUTION CONTROL EQUIPMENT: Baghouse control for EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, and EUINDUCTION4

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.39 pph	Test Protocol*	FGMELTING Baghouse stack	SC V.1	R 336.1301, R 336.1331
2. PM	4.91 tpy	12-month rolling time period as determined at the end of each calendar month.	FGMELTING	SC VI.2	R 336.1301, R 336.1331
3. PM10	1.23 pph	Test Protocol*	FGMELTING Baghouse stack	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
4. PM10	9.49 tpy	12-month rolling time period as determined at the end of each calendar month.	FGMELTING	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
5. PM2.5	1.23 pph	Test Protocol*	FGMELTING Baghouse stack	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
6. PM2.5	9.49 tpy	12-month rolling time period as determined at the end of each calendar month.	FGMELTING	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Metal Charged	160,000 tpy	12-month rolling time period as determined at the end of each calendar month.	FGMELTING	SC VI.3	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d)
2. Metal Charged	900 tons per day	Calendar Day	FGMELTING	SCVI.3	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGMELTING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the baghouse, has been submitted within 60 days of installation, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The permittee shall not store any scrap outside. **(R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FGMELTING unless the capture system and baghouse are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall not operate FGMELTING unless a bag leak detection system for the baghouse is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. No later than October 24, 2016, the permittee shall verify PM, PM10, and PM2.5 emission rates from FGMELTING by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall calculate monthly and 12-month rolling time period PM, PM10, and PM2.5 emissions for FGMELTING. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
3. The permittee shall monitor and record the grey iron metal charged (melting) rate for FGMELTING on a daily, monthly and 12-month rolling time period basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
4. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331(c))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVMELTBH	76	85	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FGPOURCOOL

DESCRIPTION: This flexible group includes the pouring and cooling operations at the facility. The emission units in this flexible group are controlled by a common baghouse and RTO.

Emission Units: EUPOURING, EUCOOLING

POLLUTION CONTROL EQUIPMENT: Baghouse and RTO

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.24 pph	Test Protocol*	FGPOURCOOL	SC V.1	R 336.1301, R 336.1331
2. PM	0.8 tpy	12-month rolling time period as determined at the end of each calendar month.	FGPOURCOOL	SC VI.2	R 336.1301, R 336.1331
3. PM10	0.75 pph	Test Protocol*	FGPOURCOOL	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
4. PM10	1.6 tpy	12-month rolling time period as determined at the end of each calendar month.	FGPOURCOOL	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
5. PM2.5	0.75 pph	Test Protocol*	FGPOURCOOL	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
6. PM2.5	1.6 tpy	12-month rolling time period as determined at the end of each calendar month.	FGPOURCOOL	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
7. CO	10.44 pph	Test Protocol*	FGPOURCOOL	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
8. CO	35.06 tpy	12-month rolling time period as determined at the end of each calendar month.	FGPOURCOOL	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
9. VOC	1.44 pph	Test Protocol*	FGPOURCOOL	SC V.1	R 336.1205(1)(a) & (3), R 336.1702(a)
10. VOC	4.82 tpy	12-month rolling time period as determined at the end of each calendar month.	FGPOURCOOL	SC VI.2	R 336.1205(1)(a) & (3), R 336.1702(a)

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGPOURCOOL unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the baghouse and RTO, has been submitted within 60 days of installation, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FGPOURCOOL unless the pouring and cooling capture system and baghouse are installed, maintained, and operated in accordance with the manufacturer's recommendations. On and after October 3, 2016, the permittee shall not operate FGPOURCOOL unless the pouring and cooling capture system, baghouse, and RTO are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall not operate FGPOURCOOL unless a bag leak detection system for the pouring and cooling baghouse is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. On and after October 3, 2016, the permittee shall not operate FGPOURCOOL unless the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes a minimum VOC destruction efficiency of 95 percent (by weight), maintaining a combustion temperature at or above the minimum combustion temperature as determined by the initial or any subsequent performance test and a minimum retention time of 0.5 seconds. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 52.21 (c) & (d))**
4. On and after October 3, 2016, the permittee shall install, calibrate, maintain and operate in a satisfactory manner, a temperature monitoring device in the combustion chamber of the thermal oxidizer to monitor and record the temperature, on a continuous basis, during operation of FGPOURCOOL. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 52.21 (c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. No later than October 24, 2016, the permittee shall verify PM, PM10, PM2.5, CO, and VOC emission rates and VOC percent destruction efficiency from FGPOURCOOL by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall calculate monthly and 12-month rolling time period PM, PM10, PM2.5, CO, and VOC emissions for FGPOURCOOL. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
3. The permittee shall monitor and record, in a satisfactory manner, the temperature in the combustion chamber of the thermal oxidizer, on a continuous basis, during operation of FGPOURCOOL. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 52.21 (c) & (d))**
4. The permittee shall keep, in a satisfactory manner, operating temperature records for the thermal oxidizer as required by SC IV.3. The permittee shall keep all records and calculations on file at the facility and make them available to the Department upon request **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702, R 336.1910, , 40 CFR 52.21 (c) & (d))**
5. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331(c))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRTO1	76	85	R 336.1225 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FGSANDHNDLG

DESCRIPTION: This flexible group includes the shakeout activities and the sand handling activities at the facility. The shakeout and sand handling activities are controlled by a common baghouse.

Emission Units: EUSHAKEOUT, EUSANDHNDLG, EUSILOS

POLLUTION CONTROL EQUIPMENT: Baghouse control for EUSHAKEOUT and EUSANDHNDLG

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	7.93 pph	Test Protocol*	FGSANDHNDLG	SC V.1	R 336.1301, R 336.1331
2. PM	26.63 tpy	12-month rolling time period as determined at the end of each calendar month.	FGSANDHNDLG	SC VI.2	R 336.1301, R 336.1331
3. PM10	2.3 pph	Test Protocol*	FGSANDHNDLG	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)
4. PM10	4.91 tpy	12-month rolling time period as determined at the end of each calendar month.	FGSANDHNDLG	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)
5. PM2.5	1.58 pph	Test Protocol*	FGSANDHNDLG	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)
6. PM2.5	3.37 tpy	12-month rolling time period as determined at the end of each calendar month.	FGSANDHNDLG	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Mold and Core Sand Usage	1,419,800 tpy	12-month rolling time period as determined at the end of each calendar month.	FGSANDHNDLG	SC VI.3	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21 (c) & (d)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGSANDHNDLG unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the baghouse, has been submitted within 60 days of installation, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FGSANDHNDLG unless the capture system and baghouse are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall not operate FGSANDHNDLG unless a bag leak detection system for the baghouse is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. The storage silos shall not be vented externally. **(R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. No later than October 24, 2016, the permittee shall verify PM, PM10, and PM2.5 emission rates from FGSANDHNDLG by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21 (c) & (d))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall calculate monthly and 12-month rolling time period PM, PM10, and PM2.5 emissions for FGSANDHNDLG. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
3. The permittee shall monitor and record the amount of core and mold sand usage on a monthly and 12-month rolling time period basis for FGSANDHNDLG. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVSSBH	96	85	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FGMACTEEEEE

DESCRIPTION: The affected source is a new or existing iron and steel foundry, that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. A new affected source is a source that commences construction or reconstruction on or after December 23, 2002. The regulations cover emissions from metal melting furnaces, scrap preheaters, new pouring areas, pouring stations, new automated conveyor and new pallet cooling lines, new automated shakeout lines, mold and core making lines, and fugitive emissions from foundry operations.

Emission Units: EUCHARGING, EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, EUINDUCTION4, EUPOURING, EUCOOLING, EUSHAKEOUT, EUCOREMIX, EUCOREMAKING

POLLUTION CONTROL EQUIPMENT: Baghouse, acid scrubber, RTO

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity (fugitive)	20 percent 6-min average, except for one 6-min average per hour that does not exceed 27 percent	Test Protocol	Each Building or Structure Housing any Iron or Steel Foundry Emission Source at FGMACTEEEEE	SC III.1, III.3, III.4, V.1, & VI.1 – VI.9	40 CFR 63.7690(a)(7)
2. PM ---OR--- Total Metal HAP	0.001 gr/dscf ---OR--- 0.00008 gr/dscf	Test Protocol	New Electric Induction Melting	SC III.6, V.2, V.3, VI.1, VI.6, & VI.10	40 CFR 63.7690(a)(4)(i) or (ii)
3. PM ---OR--- Total Metal HAP	0.002 gr/dscf ---OR--- 0.0002 gr/dscf	Test Protocol	New Pouring Station or Area	SC III.1, V.2, V.3, VI.6 & VI.10	40 CFR 63.7690(a)(6)(i) or (ii)
4. Volatile Organic HAP (VOHAP)	20 ppmv	Test Protocol	New Automated Conveyor and Pallet Cooling and Automated Shakeout Lines	SC V.2, V.3, VI.1, VI.2, VI.3, VI.6, VI.7, VI.8, & VI.9	40 CFR 63.7690(a)(10)

II. MATERIAL LIMIT(S)

1. The permittee shall not melt more than the limit in tons of metal in FGMACTEEEEEE per month for each month listed in the following table:

Month	Melt Limit (tons)
July 2016	1,247
August 2016	1,650
September 2016 (including October 1-2, 2016)	3,450

(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Upon startup for a new affected source, the permittee shall submit to the AQD District Supervisor, for review and approval, an operation and maintenance (O&M) plan for each capture and control system and control device for an emission unit subject to an emission limit as described in 40 CFR 63.7710. The plan shall include, but is not limited to, the following:
- Monthly inspections of the equipment that is important to the performance of the total capture system. **(40 CFR 63.7710(b)(1))**
 - Operating limits for each capture system for an emission unit subject to a limit for VOHAP or TEA. **(40 CFR 63.7710(b)(2))**
 - Preventative maintenance plan for each control device, including a schedule. **(40 CFR 63.7710(b)(3))**
 - A site-specific monitoring plan for each bag leak detection system. **(40 CFR 63.7710(b)(4))**
 - Corrective action plan for each baghouse. **(40 CFR 63.7710(b)(5))**
 - Procedures for igniting gases from mold vents. **(40 CFR 63.7710(b)(6))**

The permittee shall maintain and implement the approved O&M plans at all times. **(40 CFR 63.7710, 40 CFR 63.7745)**

2. For each capture system, wet scrubber, acid wet scrubber, or combustion device, the permittee shall establish site-specific operating limits in the O&M plans according to the procedures specified in 40 CFR 63.7733. **(40 CFR 63.7733)**
3. The permittee shall comply with the emission limits, work practice standards, and operation and maintenance requirements at all times, except during periods of startup, shutdown, or malfunction. **(40 CFR 63.7720(a))**
4. The permittee shall develop and implement a written startup, shutdown and malfunction plan (SSMP) in accordance with 40 CFR 63.6(e)(3). This plan must address the startup, shutdown and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The permittee shall operate in accordance with the SSMP when applicable. **(40 CFR 63.7720(c), 40 CFR 63.6(e)(3))**
5. For each segregated scrap storage area, bin or pile, the permittee shall prepare and operate at all times according to a written certification that the facility purchases and uses only charge material that does not include post-consumer automotive body scrap, post-consumer engine blocks, oil filters, oily turnings, lead components, mercury switches, plastics or organic liquids. **(40 CFR 63.7700(a), 40 CFR 63.7700(b))**

AND/OR

For each segregated scrap storage area, bin or pile, the permittee shall prepare and operate according to a written plan for the selection and inspection of iron and steel scrap as specified in 40 CFR 63.7700(c). **(40 CFR 63.7700(a), 40 CFR 63.7700(c))**

6. The permittee shall not use any catalyst formulation in the binder system for a warm furan box mold or core making line that contains methanol as determined by a Material Safety Data Sheet. **(40 CFR 63.7700(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate an emission source subject to an emission limit or standard for VOHAP or TEA unless the associated capture and control system is installed, operated and maintained in accordance with the approved operation and maintenance (O&M) plan. **(40 CFR 63.7690(b), 40 CFR 63.7710)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.7753)**

1. No later than October 24, 2016, the permittee shall conduct a performance test to demonstrate compliance with the opacity limit in 40 CFR 63.7690(a)(7), following the test methods and procedures in 40 CFR 63.7732(d). Subsequent compliance testing shall be conducted no less frequently than every 6 months. **(40 CFR 63.7730(a), 40 CFR 63.7731(b))**
2. No later than October 24, 2016, the permittee shall conduct performance testing to demonstrate compliance with applicable PM, Total Metal HAP and VOHAP emission rates from FG-MACT EEEEE-FOUNDRIES according to the requirements in 40 CFR 63.7(e)(1), following the test methods and procedures in 40 CFR 63.7732(b), (c), (e), (f), (g) and (h). No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 63.7730(a))**
3. The permittee shall conduct subsequent compliance testing to demonstrate compliance with all applicable emission limits, no less frequently than every 5 years. This requirement does not apply if a CEMS is used to demonstrate continuous compliance. **(40 CFR 63.7731(a))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.7753)**

1. The permittee shall install, operate, and maintain a continuous parameter monitoring system (CPMS) for each combustion device for emission units subject to the VOHAP or TEA emission limitations, to measure and record the combustion zone temperature according to the requirements in 40 CFR 63.7741(d). **(40 CFR 63.7740(a), 40 CFR 63.7740(d), 40 CFR 63.7741(d))**
2. The permittee shall install, operate and maintain a continuous parameter monitoring system (CPMS) for each capture system (wet scrubber, combustion device, or wet acid scrubber) subject to an operating limit in 40 CFR 63.7690(b)(1), according to the requirements in 40 CFR 63.7740(a)(1) and (2) and 40 CFR 63.7741(a). **(40 CFR 63.7740(a), 40 CFR 63.7741(a))**
3. The permittee shall operate each CPMS according to the requirements of 40 CFR 63.7741(f)(1) through (3). **(40 CFR 63.7741(f))**
4. During the period between the compliance date specified for the foundry and the date when operating limits have been established during the performance test, the permittee shall maintain a log detailing the operation and maintenance of the process and control equipment. **(40 CFR 63.7720(b))**
5. The permittee shall monitor the relative change in PM loading using a bag leak detection system for any baghouse used to meet PM or Total Metal HAP emission limits. **(40 CFR 63.7740(b))**
6. For applicable cooling and shakeout lines, the permittee shall monitor at all times the 3-hour average VOHAP concentration using a CEMS according to the requirements of 40 CFR 63.7741(g). **(40 CFR 63.7740(g))**
7. For applicable cooling and shakeout lines, the permittee may apply for alternative monitoring requirements for a CEMS according to the procedures in 40 CFR 63.7747. **(40 CFR 63.7747)**

8. The permittee shall keep records of the chemical composition of the catalyst binder formulation as specified in 40 CFR 63.7744(b). **(40 CFR 63.7744)**
9. The permittee shall keep all records specified in 40 CFR 63.7752(a)(1) through (4), records for each continuous emission monitoring system (CEMS) as specified in 40 CFR 63.7752(b)(1) through (4) and records required by 40 CFR 63.7743, 40 CFR 63.7744, and 40 CFR 63.7745. **(40 CFR 63.7752)**
10. For each baghouse that is applied to meet any PM or Total Metal HAP emission limit, the permittee shall install, operate, and maintain a bag leak detection system according to the requirements in 40 CFR 63.7741(b) and conduct inspections according to the requirements specified in 40 CFR 63.7740(b)(1) through (8). **(40 CFR 63.7740(b), 40 CFR 63.7741(b))**
11. If a control device other than a baghouse, wet scrubber, wet acid scrubber, or combustion device is used, the permittee shall prepare and submit a monitoring plan containing the information in 40 CFR 63.7690(c)(1) through (5). **(40 CFR 63.7690(c))**
12. For each emission unit in FGMACTEEEEEE, the permittee shall demonstrate initial compliance with the work practice standards and the operation and maintenance requirements as specified in 40 CFR 63.7735 and 40 CFR 63.7736. **(40 CFR 63.7735, 40 CFR 63.7736)**
13. The permittee shall monitor and collect data to demonstrate continuous compliance in accordance with 40 CFR 63.7742. **(40 CFR 63.7742)**
14. The permittee shall demonstrate continuous compliance with all applicable emission limitations in accordance with 40 CFR 63.7743. **(40 CFR 63.7743)**
15. The permittee shall maintain records that document continuous compliance with the requirements of 40 CFR 63.7700(b) or (c) as specified in 40 CFR 63.7744(a). **(40 CFR 63.7744)**
16. Beginning July 1, 2016, and continuing through October 2, 2016, the permittee shall keep records of the total metal melted, in tons, in FGMACTEEEEEE for each calendar month to demonstrate compliance with the material limits in SC II.1.

VII. REPORTING

1. The permittee shall report each instance in which each emission limitation, each work practice standard, and each operation and maintenance requirement was not met, in accordance with the requirements of 40 CFR 63.7751. **(40 CFR 63.7746, 40 CFR 63.7751)**
2. The permittee shall submit applicable notifications specified in 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 63.8(e), 63.8(f)(4) through (6), and 63.9(b) through (h) for an initial notification, a notification of intent to conduct a performance test, and a notification of compliance status as specified in 40 CFR 63.7750. **(40 CFR 63.7750)**
3. The permittee shall submit all semiannual compliance reports and semiannual reports of monitoring and deviations from any emissions limitation or operation and maintenance requirement as required by 40 CFR 63.7751(a), (b), and (d). **(40 CFR 63.7751 (a), (b), and (d))**
4. If a startup, shutdown, or malfunction occurs during the semiannual reporting period, that is not consistent with the SSMP, the permittee shall submit an immediate SSM report according to the requirements of 40 CFR 63.10(d)(5)(ii). **(40 CFR 63.10(d)(5)(ii), 40 CFR 63.7751(c))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart EEEEE for Iron and Steel Foundries by the compliance date. **(40 CFR Part 63, Subparts A and EEEEE)**