

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION**

June 14, 2023

**PERMIT TO INSTALL**  
199-14D

**ISSUED TO**  
Brembo North America, Inc.

**LOCATED AT**  
29991 M-60 East  
Homer, Michigan 49245

**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 Environment, Great Lakes, and Energy. 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: <b>May 24, 2023</b>	
DATE PERMIT TO INSTALL APPROVED: <b>June 14, 2023</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

## PERMIT TO INSTALL

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## COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfuction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

### POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

## 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 Environment, Great Lakes, and Energy, 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 Rule 210 (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 Rule 219 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 Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(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 condition 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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

**EMISSION UNIT SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

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

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
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 into the electric induction furnaces. The charging emissions are vented internally.	4/28/2016	FGMELTING
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 processes, building heat, and the operation of the RTO.	4/28/2016	NA

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
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	NA
EUCOREMAKING	Core making includes curing the formed core sand mixture using a non-HAP amine catalyst. There are three core making machines in EUCOREMAKING. The emissions from EUCOREMAKING are controlled by an acid scrubber.	4/28/2016	NA
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	FGENGINES
EUENGINE2	A 55-kW diesel fired emergency fire pump #1, manufactured in model year 2007 or later and a displacement of less than 10 liters/cylinder	4/28/2016	FGENGINES
EUENGINE3	A 55-kW diesel fired emergency fire pump #2, manufactured in model year 2007 or later and a displacement of less than 10 liters/cylinder	4/28/2016	FGENGINES
EUENGINE4	A 177-kW diesel fired emergency cooling water pump #1, manufactured in model year 2007 or later and a displacement of less than 10 liters/cylinder	4/28/2016	FGENGINES
EUENGINE5	A 177-kW diesel fired emergency cooling water pump #2, manufactured in model year 2007 or later and a displacement of less than 10 liters/cylinder	4/28/2016	FGENGINES

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 336.1291.

**EUFINISHING  
 EMISSION UNIT CONDITIONS**

**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**

Finishing Baghouse

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	2.46 pph	Hourly	EUFINISHING	SC V.1, SC V.2	R 336.1301, R 336.1331
2. PM	1.59 tpy	12-month rolling time period as determined at the end of each calendar month.	EUFINISHING	SC VI.2	R 336.1205
3. PM10	2.05 pph	Hourly	EUFINISHING	SC V.1, SC V.2	R 336.1205(1) (a) & (3), 40 CFR 52.21(c) & (d)
4. PM10	1.33 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)
5. PM2.5	1.37 pph	Hourly	EUFINISHING	SC V.1, SC V.2	R 336.1205(1) (a) & (3), 40 CFR 52.21(c) & (d)
6. PM2.5	1.14 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)

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Metal shipped (Good Ton Sold)	160,000 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 RESTRICTION(S)**

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 PARAMETER(S)**

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. The permittee shall verify PM, PM10 and PM2.5 emission rates from EUFINISHING by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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))**

2. Not later than December 31, 2024, the permittee shall verify the PM, PM10 and PM2.5 emission rates from EUFINISHING and at a minimum, every five years thereafter, from the date of the last test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d), Consent Order AQD No. 2023-02)**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.2001)**

**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, based on site specific emission factors or emission factors from the most recent stack test results for EUFINISHING, and the amount of metal (Good Ton Sold) shipped. 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))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

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

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

**IX. OTHER REQUIREMENT(S)**

NA

<b>EUNATGAS EMISSION UNIT CONDITIONS</b>
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**DESCRIPTION**

Natural gas fired processes, building heat, and the operation of the RTO.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

NA

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
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 RESTRICTION(S)**

NA

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

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 RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

NA

**EUCOREMIX  
 EMISSION UNIT CONDITIONS**

**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:** NA

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	13.0 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)

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Core Sand Usage	40,000 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 RESTRICTION(S)**

NA

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

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))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

NA

**EUCOREMAKING  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

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

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Acid Scrubber and Finishing Baghouse (collection from Core Machine Day Bins)

**I. EMISSION LIMIT(S)**

NA

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Core Sand Usage	40,000 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 336.1225, R 336.1702(a)
2. Catalyst Usage	22.2 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 336.1225, R 336.1702(a)

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. 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))**
2. The permittee shall only use a DMIPA catalyst for EUCOREMAKING. **(R336.1225, R 336.1702(a))**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

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 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  $\pm 1$  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)**
6. The permittee shall not operate EUCOREMAKING unless the scrubber system has an interlock system that is operating properly, is installed, maintained and operated in a satisfactory manner. The interlock system shall be calibrated monthly and shall trigger automatically and shut off of EUCOREMAKING if pH, pump flow, or differential pressure for the scrubber is out of acceptable range. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910)**

#### **V. TESTING/SAMPLING**

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

1. The permittee shall annually test and certify the interlock systems for EUCOREMAKING to show compliance with SC. IV.6. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

#### **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 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))**
3. 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))**

4. The permittee shall monitor and record the acid scrubber liquid flow rate, pressure drop, and pH on once per shift, and no less frequently than twice in each 24-hour period while the core making process is operating 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))**
5. 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))**
6. 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))**
7. 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))**
8. The permittee shall maintain records of the monthly calibrations of the interlock system and keep annual testing and certification records of the interlock system to show compliance with SC V.1. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

## **VII. REPORTING**

NA

## **VIII. STACK/VENT RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVSCRBR	33 <sup>1</sup>	78 <sup>1</sup>	R 336.1225

## **IX. OTHER REQUIREMENT(S)**

NA

### **Footnotes:**

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

**FLEXIBLE GROUP SPECIAL CONDITIONS**

**FLEXIBLE GROUP SUMMARY TABLE**

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

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGMELTING	This flexible group includes scrap charging and 4 electric induction melting furnaces. The four melting furnaces are controlled by a common baghouse.	EUCHARGHNDLG, 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.	EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, EUINDUCTION4, EUPOURING, EUCOOLING, EUSHAKEOUT
FGENGINES	Five Emergency Engines of various sizes for power generation, fire suppression, and cooling	EUENGINE1, EUENGINE2, EUENGINE3, EUEINGINE4, EUENGINE5

**FGMELTING  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

This flexible group includes scrap handling, pouring into molds, and 4 electric induction melting furnaces. The four melting furnaces are controlled by a common baghouse.

**Emission Unit:** EUCHARGEHNDLG, EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, EUINDUCTION4

**POLLUTION CONTROL EQUIPMENT**

Melt Shop Baggouse

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	5.78 pph	Hourly	FGMELTING	SC V.1, SC V.2	R 336.1301, R 336.1331
2. PM	3.74 tpy	12-month rolling time period as determined at the end of each calendar month.	FGMELTING	SC VI.2	R 336.1205
3. PM10	5.32 pph	Hourly	FGMELTING	SC V.1, SC V.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
4. PM10	3.44 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	2.93 pph	Hourly	FGMELTING	SC V.1, SC V.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
6. PM2.5	2.45 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)

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
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	833 tons per day	Calendar Day	FGMELTING	SC VI.3	R 336.1205(1) (a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d)

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

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 PARAMETER(S)**

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. The permittee shall verify PM, PM10, and PM2.5 emission rates from FGMELTING by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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))**

- Not later than December 31, 2024, the permittee shall verify the PM, PM10, and PM2.5 emission rates from FGMELTING and at a minimum, every five years thereafter, from the date of the last test. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d), Consent Order AQD No. 2023-02)**
- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.2001)**

**VI. MONITORING/RECORDKEEPING**

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

- 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))**
- The permittee shall calculate monthly and 12-month rolling time period PM, PM10, and PM2.5 emissions for FGMELTING, based on site specific emission factors or emission factors from the most recent stack test results for FGMELTING, and the amount of metal charged per day and per month. 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))**
- 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))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

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 / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVMELTBH	73	100	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENT(S)**

NA

**FGPOURCOOL  
 FLEXIBLE GROUP CONDITIONS**

**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 Unit:** EUPOURING, EUCOOLING

**POLLUTION CONTROL EQUIPMENT**

Pouring and Cooling Baghouse and RTO

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	1.71 pph	Hourly	FGPOURCOOL	SC V.1, SC V.2,	R 336.1301, R 336.1331
2. PM	1.10 tpy	12-month rolling time period as determined at the end of each calendar month.	FGPOURCOOL	SC VI.2	R 336.1205
3. PM10	1.71 pph	Hourly	FGPOURCOOL	SC V.1, SC V.2,	R 336.1205(1) (a) & (3), 40 CFR 52.21 (c) & (d)
4. PM10	1.10 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	1.32 pph	Hourly	FGPOURCOOL	SC V.1, SC V.2,	R 336.1205(1) (a) & (3), 40 CFR 52.21 (c) & (d)
6. PM2.5	1.10 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	26.52 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)
8. VOC	8.54 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)
9. VOC	3.37 pph ---OR--- 94% destruction efficiency (by weight)	Hourly	FGPOURCOOL	SC V.1, SC V.2,	R 336.1205(1)(a) & (3), R 336.1702(a)

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

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 PARAMETER(S)**

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. 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. 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 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. 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. The permittee shall verify PM, PM10, PM2.5, and VOC emission rates, or the VOC percent destruction efficiency in lieu of the VOC emission rate, from FGPOURCOOL by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 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,

including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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))**

2. No less than every five years from the date of the last test, the permittee shall verify the PM, PM10, PM2.5, VOC emission rates, or the VOC percent destruction efficiency in lieu of the VOC emission rate from FGPOURCOOL. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.2001)**

#### **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, based on site specific emission factors or emission factors from the most recent stack test results for FGPOURCOOL, and the amount of metal charged per month. 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 keep, in a satisfactory manner, all records of replacement or calibration for the temperature monitoring device (thermocouple) in the combustion chamber of the thermal oxidizer. The monitoring device (thermocouple) shall be replaced or calibrated no less than once per calendar year. The permittee shall keep these records 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)**
6. 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 RESTRICTION(S)**

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

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

**IX. OTHER REQUIREMENT(S)**

NA

**FGSANDHNDLG  
 FLEXIBLE GROUP CONDITIONS**

**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 Unit:** EUSHAKEOUT, EUSANDHNDLG, EUSILOS

**POLLUTION CONTROL EQUIPMENT**

Sand Handling Baghouse for EUSHAKEOUT and EUSANDHNDLG. No control for EUSILOS

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	21.13 pph	Hourly	FGSANDHNDLG Baghouse	SC V.1, SC V.2	R 336.1301, R 336.1331
2. PM	13.67 tpy	12-month rolling time period as determined at the end of each calendar month.	FGSANDHNDLG Baghouse	SC VI.2	R 336.1205
3. PM10	15.74 pph	Hourly	FGSANDHNDLG Baghouse	SC V.1, SC V.2	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)
4. PM10	10.18 tpy	12-month rolling time period as determined at the end of each calendar month.	FGSANDHNDLG Baghouse	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)
5. PM2.5	8.75 pph	Hourly	FGSANDHNDLG Baghouse	SC V.1, SC V.2	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)
6. PM2.5	7.32 tpy	12-month rolling time period as determined at the end of each calendar month.	FGSANDHNDLG Baghouse	SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Mold and Core Sand Usage	1,440,000 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 RESTRICTION(S)**

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 PARAMETER(S)**

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. The permittee shall verify PM, PM10, and PM2.5 emission rates from FGSANDHNDLG by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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))**

2. No less than every five years from the date of the last test, the permittee shall verify the PM, PM10, and PM2.5 emission rates from FGSANDHNDLG. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.2001)**

### **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, based on site specific emission factors or emission factors from the most recent stack test results for FGSANDHNDLG, and the amount of metal charged per month. 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 RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVSSBH	96	100	R 336.1225, 40 CFR 52.21 (c) & (d)

**IX. OTHER REQUIREMENT(S)**

NA

**FGMACTEEEEEE  
 FLEXIBLE GROUP CONDITIONS**

**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, and fugitive emissions from foundry operations.

**Emission Unit:** EUINDUCTION1, EUINDUCTION2, EUINDUCTION3, EUINDUCTION4, EUPOURING, EUCOOLING, EUSHAKEOUT

**POLLUTION CONTROL EQUIPMENT**

Baghouse, RTO

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring 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	6-minute average or hourly	Each Building or Structure Housing any Iron or Steel Foundry Emission Source at FGMACTEEEEEE	SC V.4, SC VI.1, SC VI.2, SC VI.3, SC VI.4, SC VI.5	40 CFR 63.7690(a)(7)
2. PM  ---OR---  Total Metal HAP	0.001 gr/dscf  ---OR---  0.00008 gr/dscf	Hourly	New Electric Induction Melting	SC V.1, SC V.2, SC V.6, SC V.7, SC VI.5, SC 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	Hourly	New Pouring Station or Area	SC V.1, SC V.2, SC V.6, SC V.7, SC VI.5, SC VI.10	40 CFR 63.7690(a)(6)(i) or (ii)
4. Volatile Organic HAP (VOHAP)	20 ppmv	Hourly	New Automated Conveyor and Pallet Cooling and Automated Shakeout Lines	SC V.5, SC V.6, SC V.7, SC VI.1, SC VI.2, SC VI.3, SC VI.6, SC VI.7, SC VI.8, SC VI.9	40 CFR 63.7690(a)(10)

## **II. MATERIAL LIMIT(S)**

NA

## **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:
  - a) Monthly inspections of the equipment that is important to the performance of the total capture system. **(40 CFR 63.7710(b)(1))**
  - b) Operating limits for each capture system for an emission unit subject to a limit for VOHAP or TEA. **(40 CFR 63.7710(b)(2))**
  - c) Preventative maintenance plan for each control device, including a schedule. **(40 CFR 63.7710(b)(3))**
  - d) A site-specific monitoring plan for each bag leak detection system. **(40 CFR 63.7710(b)(4))**
  - e) Corrective action plan for each baghouse. **(40 CFR 63.7710(b)(5))**
  - f) 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))**
7. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR, Part 60.13 and PS 8 of Appendix B to 40 CFR, Part 60. **(40 CFR 63.7741(g))**
8. The permittee shall operate each CEMS according to the following requirements:
  - a) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
  - b) The permittee shall reduce CEMS data as specified in § 63.8(g)(2).
  - c) Each CEMS must determine and record the 3-hour average emissions using all the hourly averages collected for periods during which the CEMS is not out-of-control.
  - d) The permittee shall record the results of each inspection, calibration, and validation check. **(40 CFR 63.7741(g))**

**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 336.1201(3))**

1. The permittee shall verify PM emission rates from FGMACTEEEEEE by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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))**

2. Before December 31, 2024, the permittee shall verify the PM emission rates from FGMACTEEEEEE. **(Consent Order AQD No. 2023-02)**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.2001)**
4. 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))**
5. The permittee shall conduct performance testing no less frequently than every 5 years to demonstrate compliance with applicable PM, Total Metal HAP and VOHAP emission rates from FGMACTEEEEEE 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. This requirement does not apply if a CEMS is used to demonstrate continuous compliance. **(40 CFR 63.7730(a), 40 CFR 63.7731(a))**
6. 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))**
7. The permittee shall conduct quarterly performance evaluations of each CEMS according to the requirements of § 63.8 and Performance Specification 8 in 40 CFR part 60, appendix B. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations. Within 60 days of completion, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of Performance Specification (PS) 8. **(40 CFR 63.7741(g))**

## **VI. MONITORING/RECORDKEEPING**

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

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 FGMACTEEEE, 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)**

## **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. The permittee shall submit all semiannual compliance reports and semiannual reports of monitoring and deviations from any emissions limitation or operation and maintenance requirement via the CEDRI. **(40 CFR 63.7751(e))**
5. 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))**
6. 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) and (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)**

## **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)**

**FGENGINES  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Five Emergency Engines of various sizes for power generation and fire suppression

**Emission Unit:** EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Non-methane hydrocarbon (NMHC) + NOx	6.4 g/kW-hr	Hourly	FGENGINES	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	Hourly	FGENGINES	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	Hourly	FGENGINES	SC V.1 SC VI.2	40 CFR 60.4205(b), 60.4202(a), Table 1 of 40 CFR 89.112

**II. MATERIAL LIMIT(S)**

1. The permittee shall burn only diesel fuel, in any engine in FGENGINES 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 RESTRICTION(S)**

1. The permittee shall not operate each engine in FGENGINES 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 each engine in FGENGINES 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 each engine in FGENGINES 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. Each engine in FGENGINES 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. For every engine in FGENGINES operating as 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.
  - c) Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as they apply to the engine.

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 any engine in FGENGINES 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 that engine and must, to the extent practicable, maintain and operate that engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(3))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall equip and maintain each engine in FGENGINES 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)**
3. The individual nameplate capacity of EUENGINE2 and EUENGINE3 shall each not exceed 55 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)**
4. The individual nameplate capacity of EUENGINE4 and EUENGINE5 shall each not exceed 177 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 the engine in FGENGINES 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 that engine, within one year after startup, or within 1 year after the engine 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)**

**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 each engine in FGENGINES meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If any engine in FGENGINES 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 each engine in FGENGINES, 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 each engine in FGENGINES, 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 FGENGINES, 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))**

**VII. REPORTING**

1. The permittee shall submit a notification to the AQD District Supervisor, in writing, within 30 days upon switching the manner of operation of any engine in FGENGINES from a certified to non-certified manner. **(40 CFR Part 60 Subpart IIII)**

**VIII. STACK/VENT RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVENGINE1	12	60	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVENGINE2	6	25	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVENGINE3	6	25	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVENGINE4	6	29	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVENGINE5	6	29	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENT(S)**

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 FGENGINES. **(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 FGENGINES. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**