

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

July 18, 2024

**PERMIT TO INSTALL  
185-16C**

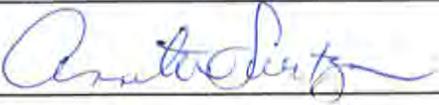
**ISSUED TO  
East Jordan Foundry, LLC**

**LOCATED AT  
2675 North US 131  
Elmira, Michigan 49730**

**IN THE COUNTY OF  
Antrim**

**STATE REGISTRATION NUMBER  
N6052**

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>November 9, 2023</b>	
DATE PERMIT TO INSTALL APPROVED: <b>July 18, 2024</b>	SIGNATURE: 
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

**Table of Contents**

COMMON ACRONYMS ..... 2

POLLUTANT / MEASUREMENT ABBREVIATIONS..... 3

GENERAL CONDITIONS ..... 4

EMISSION UNIT SPECIAL CONDITIONS..... 6

    EMISSION UNIT SUMMARY TABLE ..... 6

    EUCHRGHAND ..... 9

    EUDUCTINOC ..... 12

    EUMLTXFER ..... 15

    EUSHMM ..... 17

    EUBLAST ..... 20

    EUGRIND ..... 22

    EUDIPTANK ..... 24

    EUPUNBCM ..... 26

    EUSHELLCM ..... 29

    EULDLREPAIR ..... 32

    EUWASTESAND ..... 34

FLEXIBLE GROUP SPECIAL CONDITIONS..... 36

    FLEXIBLE GROUP SUMMARY TABLE ..... 36

    FGMELTING ..... 38

    FGPOURCOOL ..... 41

    FGSHAKEOUT ..... 44

    FGCORECHEM ..... 47

    FGNATGASUNITS..... 50

    FGEG..... 52

    FGMACTZZZZZ ..... 57

    FGPROCESSES..... 62

FGFACILITY CONDITIONS..... 70

Appendix A ..... 73

## 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	Malfunction 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 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 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.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUCHRGHAND	Charge Handling - The handling and storage of furnace charge material include internal returns (e.g. sprue, scrap), incoming scrap metal, alloy materials, inoculants, fluxes, etc.	11/16/2018	FGPROCESSES FGMACTZZZZZ
EUEIF1	Electric Induction Furnace Melting - Electric Induction Furnace (EIF) to melt and process charge material. Design holding capacity 11 tons	08/24/2018	FGMELTING FGPROCESSES FGMACTZZZZZ
EUEIF2	Electric Induction Furnace Melting - Electric Induction Furnace (EIF) to melt and process charge material. Design holding capacity 11 tons	08/31/2018	FGMELTING FGPROCESSES FGMACTZZZZZ
EUEIF3	Electric Induction Furnace Melting - Electric Induction Furnace (EIF) to melt and process charge material. Design holding capacity 11 tons	10/28/2018	FGMELTING FGPROCESSES FGMACTZZZZZ
EUEIF4	Electric Induction Furnace Melting - Electric Induction Furnace (EIF) to melt and process charge material. Design holding capacity 11 tons	10/28/2018	FGMELTING FGPROCESSES FGMACTZZZZZ
EUDUCTINOC	Ductile Inoculation - An addition of magnesium-based material to strengthen the metal when cast.	04/18/2019	FGPROCESSES FGMACTZZZZZ
EUMLTXFER	Hot Metal Transfer - The transfer of hot metal in a ladle (transfer ladle) from the electric induction furnaces to the pouring operations.	02/04/2019	FGPROCESSES FGMACTZZZZZ
EULMLPC	Large Mold Line Pouring and Cooling - The pouring and subsequent cooling of molten metal cast in a sand mold on the Large Mold Line. The mold and casting is subsequently transferred to the LML Shakeout.	03/11/2019	FGPOURCOOL FGPROCESSES FGMACTZZZZZ
EULMLSO	Large Mold Line Shakeout - The separation of mold and core sand from the casting. Sprue is subsequently transferred to Charge Handling, while mold and core sand is discharged to conveyors that are part of Sand Handling and Moldmaking.	03/11/2019	FGSHAKEOUT FGPROCESSES FGMACTZZZZZ
EU1230PC	1230 Line Pouring and Cooling -The pouring and subsequent cooling of molten metal cast in a sand mold on the 1230 Line. The mold and casting is subsequently transferred to 1230 Line Shakeout.	10/28/2018	FGPOURCOOL FGPROCESSES FGMACTZZZZZ

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU1230SO	1230 Line Shakeout - The separation of mold and core sand from the casting. Sprue is subsequently transferred to Charge Handling, while mold and core sand is discharged to conveyors that are part of Sand Handling and Moldmaking.	10/28/2018	FGSHAKEOUT FGPROCESSES FGMACTZZZZZ
EUSHMM	Sand Handling and Moldmaking – Includes mechanical sand reclamation, new sand and bond receiving and storage, moldmaking and application of mold release.	11/16/2018	FGPROCESSES FGMACTZZZZZ
EUBLAST	Shotblasting - Enclosed process for the removal of excess sand and metal from casting surface.	11/5/2018	FGPROCESSES FGMACTZZZZZ
EUGRIND	Grinding - Remove of unwanted metal at the mold parting lines and elsewhere using hand grinders, automated grinding and machining.	02/02/2019	FGPROCESSES FGMACTZZZZZ
EUDIPTANK	Asphaltic Dip Tank - The application of a low-VOC coating to finished castings.	01/20/2019	NA
EUPUNBCM	Phenolic Urethane No Bake (PUNB) Coremaking - After sand is heated to promote the reaction, a two-part resin system and a single liquid catalyst is mixed with the sand. After mixing the sand is distributed to the core box. A release agent to promote core removal may be applied to the pattern prior to forming the core.	05/01/2019	FGPROCESSES FGMACTZZZZZ
EUSHELLCM	Shell Coremaking - Resin coated sand is fed to a pattern that is preheated and coated with a release agent. Heat from the pattern cures the sand into the desired shape.	04/22/2019	FGPROCESSES FGMACTZZZZZ
EUCOREWASH	Core Washing - The application of a VOC-containing refractory material (slurry) to the core. The core is subsequently ignited (i.e. lightoff) to dry and partially destroy the VOCs when using alcohol-based wash.	04/22/2019	FGCORECHEM FGMACTZZZZZ
EUCORERELEASE	Core Release - The application on an "as needed basis" of a material to promote the release of the core from the core box.	04/22/2019	FGCORECHEM FGMACTZZZZZ
EULDLREPAIR	Ladle Repair - The removal and replacement of ladle refractory used to protect the ladle from the heat of the molten metal.	03/11/2019	FGPROCESSES FGMACTZZZZZ
EUWASTESAND	Waste Sand Dust Handling - The removal and disposition of spent sand from the system.	01/09/2019	FGPROCESSES FGMACTZZZZZ
EUMUAGEN	Makeup Air Units - Nine (9) natural-gas fired makeup air units with maximum rating of 10.4328 MMBtu/hr each. Two (2) natural-gas fired makeup air units with maximum rating of 7.8246 MMBtu/hr each.	11/16/2018	FGNATGASUNITS
EUHTRFDYOFF	Foundry Office Heaters – One (1) natural-gas fired unit to provide heat to foundry offices with a maximum total rating of 0.920 MMBtu/hr.	11/16/2018	FGNATGASUNITS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUHTRSUPPOFF	Support Office Heaters - Natural-gas fired units to provide heat to shipping office, maintenance office, grinding office, melt lab, scale office, mold office, CMM, control room, sand lab and (2) local bathroom with a maximum total rating of 0.780 MMBtu/hr.	11/16/2018	FGNATGASUNITS
EUHTROILBLD	Oil Building Heater - Natural-gas fired unit to provide heat to oil storage building with a maximum total rating of 0.733 MMBtu/hr.	11/16/2018	FGNATGASUNITS
EUBOILERS	Hot Water Boilers - One (1) natural-gas hot water heater rated at a maximum of 0.5 MMBtu/hr to provide hot water to showers, restrooms, kitchen, etc.	11/16/2018	FGNATGASUNITS
EUFNCHEAT	Furnace Heaters - Four (4) natural-gas fired furnace heaters rated up to 2.0 MMBtu/hr to maintain environment when furnaces are not in use or as necessary.	11/16/2018	FGNATGASUNITS FGMACTZZZZZ
EULDLHEAT	Ladle Preheaters - Three (3) natural-gas fired pedestal ladle heaters rated up to 1.5 MMBtu/hr each.	11/16/2018	FGNATGASUNITS FGMACTZZZZZ
EULDLREPAIRHTR	Ladle Repair Torches - Seven (7) natural-gas fired ladle repair curing torches, one (1) rated up to 2.0 MMBtu/hr and six (6) rated up to 0.40 MMBtu/hr each.	11/16/2018	FGNATGASUNITS FGMACTZZZZZ
EUDUCTHTRS	Baghouse Duct Heaters - Eight (8) natural-gas duct heaters for LML Mold Cooling, 1230 Mold Cooling, Sand Cooling, Hot Sand Screen, Cool Sand Screen. Three (3) units are rated at up to 1.50 MMBtu/hr each and five (5) units are rated at up to 0.80 MMBtu/hr each.	11/16/2018	FGNATGASUNITS FGMACTZZZZZ
EUSHELLHEATERS	Shell Core Heaters - Four (4) natural-gas heaters to heat shell core boxes. Two (2) rated at 1.0 MMBtu/hr and two (2) rated at 0.50 MMBtu/hr.	11/16/2018	FGNATGASUNITS FGMACTZZZZZ
EUEG1	300 KW Natural Gas-Fired Emergency Generator - The emergency generator will be used to supply emergency power sufficient to remove any metal left in the furnaces should a power outage occur.	08/12/2018	FGEG
EUEG2	300 KW Natural Gas-Fired Emergency Generator - The emergency generator will be used to supply emergency power sufficient to remove any metal left in the furnaces should a power outage occur.	08/12/2018	FGEG
EUROADS	Roadways and Parking Areas - Paved roads and parking areas used for receipt and shipping of goods as well as employee and visitor parking.	11/16/2018	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 336.1291.

**EUCHRGHAND  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Handling and storage of furnace charge material includes internal returns (e.g. sprue, scrap), incoming scrap metal, alloy materials, inoculants, fluxes, etc.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Received scrap metal and alloys will be processed indoors. Fabric filter collector (baghouse) control. Alloy addition, sprue return belt and the sprue crusher will be vented to Baghouses A B, H, J, and K then exhausted out stacks SVAB-BH, SVHJ-BH, and SVK-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

<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. VE	10% opacity	6-minute average	EUCHRGHAND Fugitives from building enclosure	SC V.1	R 336.1301(1)(c)

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

NA

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

1. The permittee shall not operate EUCHRGHAND unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall process and store furnace charge material in an enclosed building. **(R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate EUCHRGHAND unless the fabric filter collector controlling emissions from the sprue return belt and sprue crusher is installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate EUCHRGHAND unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

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

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUCHRGHAND a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.1, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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)&(b), R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for EUCHRGHAND on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
3. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUCHRGHAND. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

#### **VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

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

NA

**Footnotes:**

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

**EUDUCTINOC  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

To provide strength an addition of a magnesium-based material is placed into the ladle and then molten metal is poured from one of the furnaces into the ladle.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for EUDUCTINOC includes Baghouses A and B then vented to stack SVAB-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

<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. VE	10% opacity	6-minute average	EUDUCTINOC Fugitives from building enclosure	SC V.1	R 336.1301(1)(c)
2. VOC	0.28 pph	Hourly	EUDUCTINOC	SC VI.4	R 336.1702(a), R 336.2810
3. VOC	0.32 tpy*	12-month rolling time period as determined at the end of each calendar month	EUDUCTINOC	SC VI.3	R 336.1702(a), R 336.2810
* Restricted by the throughput limit and pound per ton of metal charged emission limit in FGPROCESSES					

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

NA

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

1. The permittee shall not operate EUDUCTINOC unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate EUDUCTINOC unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate EUDUCTINOC unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2802)**

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

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUDUCTINOC a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.1, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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)&(b), R 336.2803, R 336.2804)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for EUDUCTINOC on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall calculate and record, in a satisfactory manner, the VOC emissions in tons for EUDUCTINOC on a monthly, and 12-month rolling time period basis using emission factors approved by the AQD District Supervisor. 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)&(b), R 336.1702, R 336.2810)**
4. The permittee shall keep all records necessary to demonstrate compliance with the hourly VOC emission limit in a manner acceptable to the AQD District Supervisor. **(R 336.1205(1)(a)&(b), R 336.1702, R 336.2810)**
5. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUDUCTINOC. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

**EUMLTXFER  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

The transfer of hot metal in a ladle (transfer ladle) from the electric induction furnaces to the pouring operations.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control. Incidental capture of emissions occurs during the transfer of metal to and from the metal transfer ladles by Baghouses A and B then exhausted out stack SVAB-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

<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. VE	10 % opacity	6-minute average	EUMLTXFER Fugitives from building enclosure	SC V.1	R336.1301(1)(c)

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

NA

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

1. The permittee shall not operate EUMLTXFER unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804)**

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

1. The permittee shall not operate EUMLTXFER unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer’s recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910)**

2. The permittee shall not operate EUMLTXFER unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2802)**

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

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUMLTXFER a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.1, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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)&(b), R 336.2803, R 336.2804)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for EUMLTXFER on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUMLTXFER. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

#### **VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

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

NA

#### **Footnotes:**

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

**EUSHMM  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Sand Handling and Moldmaking – Includes mechanical sand reclamation, new sand and bond receiving and storage, moldmaking and application of mold release.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for EUSHMM includes portions Baghouses C, D, E, F, and G then vented to stacks SVC-BH, SVD-BH, SVE-BH, SVF-BH, and SVG-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VE	10% opacity	6-minute average	EUSHMM Fugitives from building enclosure	SC V.1	R 336.1301(1)(c)

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Sand Processed	1,920,000 tons/year	12-month rolling time period as determined at the end of each calendar month	EUSHMM	SC VI.3	R 336.1225 R 336.1205 R 336.2803, R 336.2804, R 336.2810

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

1. The permittee shall not operate EUSHMM unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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

submission, 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 336.1910, R 336.1911, R 336.2803, R 336.2804)**

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

1. The permittee shall not operate EUSHMM unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910)**
2. The permittee shall not operate EUSHMM unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2802)**

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

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUSHMM a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.1, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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)&(b), R 336.2803, R 336.2804)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for EUSHMM on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall monitor and record, in a satisfactory manner, the tons of sand processed 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)&(b), R 336.1225, R 336.2803, R 336.2804, R 336.2810)**
4. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUSHMM. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

**EUBLAST  
EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Enclosed process for the removal of excess sand and metal from casting surface.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for EUBLAST includes Baghouses H and J then vented to stack SVHJ-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

<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. VE	10% opacity	6-minute average	EUBLAST	SC V.1	R 336.1301(1)(c)

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

NA

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

1. The permittee shall not operate EUBLAST unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804)

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

1. The permittee shall not operate EUBLAST unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. (R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910)

2. The permittee shall not operate EUBLAST unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2802)**

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

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUBLAST a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.1, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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)&(b), R 336.2803, R 336.2804)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for EUBLAST on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUBLAST. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

#### **VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

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

NA

#### **Footnotes:**

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

**EUGRIND  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Grinding - Removal of unwanted metal at the mold parting lines and elsewhere using hand grinders, automated grinding and machining.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for EUGRIND includes Baghouses H and J then vented to stack SVHJ-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VE	10% opacity	6-minute average	EUGRIND	SC V.1	R 336.1301(1)(c)

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

NA

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

1. The permittee shall not operate EUGRIND unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804)**

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

1. The permittee shall not operate EUGRIND unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225,**

**R 336.1331, R 336.1910)**

2. The permittee shall not operate EUGRIND unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2802)**

**V. TESTING/SAMPLING**

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUGRIND a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.1, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

**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)&(b), R 336.2803, R 336.2804)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for EUGRIND on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUGRIND. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

**EUDIPTANK  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

A dip coat coating line to coat special iron castings that applies a low-VOC coating to finished castings.

Flexible Group ID: NA

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	15.2 tpy	12-month rolling time period as determined at the end of each calendar month	EUDIPTANK	SC VI.2	R 336.1702(a), R 336.2810

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.60 pounds per gallon of coating, minus water, as applied	Monthly	EUDIPTANK	SC V.1	R 336.1702(a) R 336.1205 R 336.2810

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

- The dip tank shall not be operated at temperatures greater than 160°F. (R 336.1224, R 336.1225, R 336.1702(a), R 336.2810)

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

- The permittee shall not operate EUDIPTANK unless a device to measure the temperature of the coating material in the tank is installed, maintained, and operated in accordance with the manufacturer's recommendations. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.2810)

**V. TESTING/SAMPLING**

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

- Once every five years, the permittee shall determine the VOC content, water content and density of any dip coating material used in EUDIPTANK, as received and as applied, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. (R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2810)

**VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall record once daily, the temperature of the material in the dip tank while operating. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.2810)**
2. The permittee shall keep a separate record of the following for EUDIPTANK:
  - a) The type of each material used. This includes but is not limited to coating material, makeup solvents, and clean-up solvents.
  - b) Chemical composition of each material, including weight percent of each component.
  - c) The VOC content of each material, with and without water and exempt solvents, (in percent by weight or pounds per gallon), as received and as applied.
  - d) The usage rate (in pounds or gallons) of each material as applied (daily).
  - e) The actual hours of operation each day.
  - f) VOC emission calculations determining the monthly emission rate and the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.2810)**

## **VII. REPORTING**

NA

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

1. The permittee shall not discharge the emissions from EUDIPTANK to a stack, emissions shall be discharged to the in-plant environment. **(R 336.1205(3), R 336.1225, R 336.2803, R 336.2804)**

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

NA

### **Footnotes:**

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

**EUPUNBCM  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Phenolic Urethane No Bake (PUNB) Coremaking - After sand is heated to promote the reaction, a two-part resin and a single liquid catalyst system is mixed with the sand. After mixing the sand is distributed to the core box. A release agent to promote core removal may be applied to the pattern prior to forming the core.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control includes baghouses G and L then exhausted out stacks SVG-BH and SVL-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	14.47 pph	Hour	EUPUNBCM	SC VI.3	R 336.1702(a) R 336.2810
2. VOC	1.70 tpy*	12-month rolling time period as determined at the end of each calendar month	EUPUNBCM	SC VI.3	R 336.1702(a) R 336.2810
3. VE	10% opacity	6-minute average	EUPUNBCM	SC V.1	R 336.1301(1)(c)

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

\* Restricted by VOC content and the throughput limit on resins.

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Resins	4 tons/month	Calendar month	EUPUNBCM	SC VI.3	R 336.1702(c) R 336.1205 R 336.2810
2. Resins	48 tons/year	12-month rolling time period as determined at the end of each calendar month	EUPUNBCM	SC VI.3	R 336.1702(c) R 336.1205 R 336.2810

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

1. The permittee shall not operate EUPUNBCM unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouse, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.

- c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.  
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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate EUPUNBCM unless the associated fabric filter collector is installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2810)**
2. The permittee shall not operate EUPUNBCM unless a gauge, which measures the pressure drop across the fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

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

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUPUNBCM a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.3, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall measure continuously and record daily while operating, the differential pressure ( $\Delta P$ ) measured in inches of water across the baghouse. **(R 336.1910)**
2. The permittee shall maintain records of the hours of operation of the process. **(R 336.1224, R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
3. The permittee shall keep a separate record of the following for EUPUNBCM on a daily averaging period:
  - a) The type of each material used. This includes but is not limited to resin material, wash or cleaning solvents, makeup solvents, purge and clean-up solvents.
  - b) Chemical composition of each material, including weight percent of each component.
  - c) The VOC content of each material, with and without water and exempt solvents, (in percent by weight or pounds per gallon), as received and as applied.
  - d) The usage rate (in pounds or gallons) of each material as applied including resin use records on a monthly and 12 month rolling time period basis.
  - e) The actual hours of operation.
  - f) VOC emission calculations determining an average hourly emission rate in pounds per hour for each calendar day.

- g) VOC emission calculations determining the monthly emission rate and the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.2810)**

- 4. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUPUNBCM. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

**EUSHELLCM  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Shell core making – Resin coated sand is fed to a pattern that is preheated and coated with a release agent. Heat from the pattern cures the sand into the desired shape.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for EUSHELLCM includes Baghouse L then vented to stack SVL-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.83 pph	Hour	EUSHELLCM	SC VI.3	R 336.1702(a) R 336.2810
2. VOC	2.85 tpy	12-month rolling time period as determined at the end of each calendar month	EUSHELLCM	SC VI.3	R 336.1702(a) R 336.2810
3. VE	10% opacity	6-minute average	EUSHELLCM	SC V.1	R 336.1301(1)(c)

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Shell Cores	1500 tons	12-month rolling time period, as determined at the end of each calendar month	EUSHELLCM	SC VI.2	R 336.1702 R 336.2810 R 336.1205

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

1. The permittee shall not operate EUSHELLCM unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouse, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate EUSHELLCM unless the associated fabric filter collector is installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2810)**
2. The permittee shall not operate EUSHELLCM unless a gauge, which measures the pressure drop across the fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

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

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

1. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for EUSHELLCM a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.3, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall measure continuously and record daily while operating, the differential pressure ( $\Delta P$ ) measured in inches of water across the baghouse. **(R 336.1910))**
2. The permittee shall maintain records of the tons of shell cores produced on a monthly and 12-month rolling time period basis. **(R 336.1702, R 336.2810)**
3. The permittee shall keep a separate record of the following for EUSHELLCM on a daily averaging period:
  - a) The type of each material used. This includes but is not limited to resin material, wash or cleaning solvents, makeup solvents, purge and clean-up solvents.
  - b) Chemical composition of each material, including weight percent of each component.
  - c) The VOC content of each material (in percent by weight or pounds per gallon), as received and as applied.
  - d) The usage rate (in pounds or gallons) of each material as applied.
  - e) The actual hours of operation.
  - f) VOC emission calculations determining an average hourly emission rate in pounds per hour for each calendar day.
  - g) VOC emission calculations determining the monthly emission rate and the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.2810)**

4. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for EUSHELLCM. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303)**

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

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

Removal and replacement of refractory ladles used to protect the ladle from the heat of the molten metal.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for EULDLREPAIR includes Baghouse K then vented to stack SVK-BH.

**I. EMISSION LIMIT(S)**

Stack particulate emission limits are established in FGPROCESSES.

**II. MATERIAL LIMIT(S)**

NA

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

1. The permittee shall not operate EULDLREPAIR unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouse, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate EULDLREPAIR unless the fabric filter collector is installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate EULDLREPAIR unless a gauge, which measures the pressure drop across the fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1910, R 336.2810)**

**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 monitor and record, in a satisfactory manner, the pressure drop across the baghouse for EULDLREPAIR on a once per operating shift basis. (R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2810)

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

## **EUWASTESAND EMISSION UNIT CONDITIONS**

### **DESCRIPTION**

The removal and disposition of spent sand from the system.

**Flexible Group ID:** FGPROCESSES, FGMACTZZZZZ

### **POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for EUWASTESAND includes Baghouses H and J then vented to stack SVHJ-BH.

#### **I. EMISSION LIMIT(S)**

Stack particulate emission limits are established in FGPROCESSES.

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

NA

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

1. The permittee shall not operate EUWASTESAND unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate EUWASTESAND unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate EUWASTESAND unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2810)**

**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 monitor and record, in a satisfactory manner, the pressure drop across each baghouse for EUWASTESAND on a once per operating shift basis. (R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2810)

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**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.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMELTING	Electric Induction Furnace Melting - Four (4) Electric Induction Furnaces (EIFs) to melt and process charge material. The design melt rate is 28 tons per hour and permit requested annual limit of 128,000 tons per year.	EUEIF1 EUEIF2 EUEIF3 EUEIF4
FGPOURCOOL	The pouring and subsequent cooling of molten metal cast in a sand mold. The mold and casting is subsequently transferred to Shakeout.	EULMLPC EU1230PC
FGSHAKEOUT	The separation of mold and core sand from the casting. Sprue is subsequently transferred to Charge Handling, while mold and core sand is discharged to conveyors that are part of Sand Handling and Moldmaking.	EULMLSO EU1230SO
FGCORECHEM	The application of a VOC-containing refractory material (slurry) to the core. The core is subsequently ignited (i.e. lightoff) to dry and partially destroy the VOCs when using alcohol-based wash. And the application on an "as needed basis" of a material to promote the release of the core from the pattern.	EUCOREWASH EUCORERELEASE
FGNATGASUNITS	Various natural gas combustion sources throughout the facility.	EUMUAGEN EUHTRFDROFF EUHTRSUPPOFF EUHTROILBLD EUBOILERS EUFNCHEAT EULDLHEAT EULDLREPAIRHTR EUDUCTHTRS EUSHELLHEATERS
FGEG	Two (2) natural gas fired emergency generators rated at 300 kW each.	EUEG1 EUEG2

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMACTZZZZZ	All emission units throughout the facility subject to MACT ZZZZZ. This includes all processes related to production.	EUCHRGHAND EUEIF1 EUEIF2 EUEIF3 EUEIF4 EUDUCTINOC EUMLTXFER EULMLPC EULMLSO EU1230PC EU1230SO EUSHMM EUBLAST EUGRIND EUPUNBCM EUSHELLCM EUCOREWASH EUCORERELEASE EULDLREPAIR EUWASTESAND EUFNCHEAT EULDLHEAT EULDLREPAIRHTR EUDUCTHTRS EUSHELLHEATERS
FGPROCESSES	All equipment routed to baghouses A, B, C, D, E, F, G, H, J, K, and L	EUCHRGHAND EUEIF1 EUEIF2 EUEIF3 EUEIF4 EUDUCTINOC EUMLTXFER EULMLPC EULMLSO EU1230PC EU1230SO EUSHMM EUBLAST EUGRIND EUPUNBCM EUSHELLCM EULDLREPAIR EUWASTESAND

## FGMELTING FLEXIBLE GROUP CONDITIONS

**DESCRIPTION**

This flexible group includes four (4) electric induction melting furnaces.

**Emission Unit:** EUEIF1, EUEIF2, EUEIF3, EUEIF4

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for FGMELTING includes Baghouses A and B then vented to stack SVAB-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.84 pph	Hourly	FGMELTING	SC V.1	R 336.1702(a) R 336.2803 R 336.2804 R 336.2810
2. VOC*	1.92 tpy	12-month rolling time period as determined at the end of each calendar month	FGMELTING	SC V.1, SC VI.3, VI.4	R 336.1702(a) R 336.2803 R 336.2804 R 336.2810
3. CO	9.24 pph	Hourly	FGMELTING	SC V.1	R 336.2804 R 336.2810
4. CO*	21.12 tpy	12-month rolling time period as determined at the end of each calendar month	FGMELTING	SC V.1, SC VI.3, VI.4	R 336.2804 R 336.2810
5. VE	10% opacity	6-minute average	FGMELTING	SC V.2	R 336.1301(1)(c) R 336.2810

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

\* Restricted by the throughput limit and pound per ton of metal charged emission limit in FGPROCESSES

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Charged material	128,000 tpy	12-month rolling time period as determined at the end of each calendar month	FGMELTING	SC VI.4	R 336.1205 R 336.1225 R 336.1702 R 336.2810

**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 operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:

- a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
- b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate FGMELTING unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate FGMELTING unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**

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

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

1. Every five years the permittee shall verify CO and VOC emission rates from FGMELTING by testing at owner's expense, in accordance with Department requirements. All associated processes must be operating similarly and at maximum routine operating conditions during the verification testing. Test results from SVAB-BH, SVC-BH, SVD-BH, and SVE-BH shall be totaled and compared to aggregate emission limits from FGMELTING, FGPOURCOOL, and FGSHAKEOUT. 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, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for FGMELTING a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.3, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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)&(b), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for FGMELTING on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**
3. The permittee shall monitor and record, in a satisfactory manner, the daily hours of operation and the tons of metal charged to FGMELTING on an hourly basis using a calendar day average, and calculations of hours and tons 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 336.1225, R 336.2803, R 336.2804, R 336.2810)**
4. The permittee shall calculate and keep records of monthly VOC and CO emissions for FGMELTING, to verify compliance with SC I.2 and SC I.4, using the monthly metal charging rate for FGMELTING and emission factors in lb/ton metal melted generated from the stack test conducted pursuant to SC V.1. Prior to completion of the stack test emissions may be calculated with emission factors acceptable to the AQD District Supervisor used to determine the emission limits. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**
5. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit, including records of visible emissions observations required in SC V.2. **(R 336.1225, R 336.1331(1)(c), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

## **VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

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

NA

### **Footnotes:**

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

**FGPOURCOOL  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

This flexible group includes the pouring and cooling operations for both production lines (LML and 1230) at the facility. Includes VOC emissions from mold release agent usage. The emission units in this flexible group are controlled by common baghouses.

**Emission Unit:** EULMLPC, EU1230PC

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control for FGPOURCOOL includes portions of Baghouses A, B, D, and E then vented to stacks SVAB-BH, SVD-BH, and SVE-BH.

**I. EMISSION LIMIT(S)** <sup>(a)</sup>

<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. CO	182.66 pph	Hourly	FGPOURCOOL	SC V.1	R 336.2804 R 336.2810
2. CO*	417.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGPOURCOOL	SC VI.4	R 336.2804 R 336.2810
3. VOC	34.75 pph	Hourly	FGPOURCOOL	SC V.1	R 336.1702 R 336.2810
4. VOC*	79.42 tpy	12-month rolling time period as determined at the end of each calendar month	FGPOURCOOL	SC VI.4	R 336.1702 R 336.2810
5. VE	10% opacity	6-minute average	FGPOURCOOL	SC V.2	R 336.1301(1)(c) R 336.2810

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

\* Restricted by the throughput limit and pound per ton of metal charged emission limit in FGPROCESSES

**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 operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.

- b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate FGPOURCOOL unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate FGPOURCOOL unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**

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

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

1. Every five years the permittee shall verify CO and VOC emission rates from FGPOURCOOL by testing at owner's expense, in accordance with Department requirements. All associated processes must be operating similarly and at maximum routine operating conditions during the verification testing. Test results from SVAB-BH, SVC-BH, SVD-BH, and SVE-BH shall be totaled and compared to aggregate emission limits from FGMELTING, FGPOURCOOL, and FGSHAKEOUT. 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 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 Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1301, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c)&(d))**
2. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for FGPOURCOOL a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.3, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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 shall 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, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for FGPOURCOOL on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**
3. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit, including records of visible emissions observations required in SC V.2. **(R 336.1205, R 336.1225, R 336.1301, R 336.1331(1)(c), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
4. The permittee shall calculate and keep records of monthly and 12-month rolling time period basis VOC and CO emissions for FGPOURCOOL, to verify compliance with SC I.2 and SC I.4, using the monthly metal pour rate and emission factors in lb/ton metal poured generated from the stack test conducted pursuant to SC V.1. Prior to completion of the stack test emissions may be calculated with emission factors acceptable to the AQD District Supervisor used to determine the emission limits. **(R 336.1205, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
5. The permittee shall monitor and record, in a satisfactory manner, the daily hours of operation of FGPOURCOOL 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 336.1225, R 336.2803, R 336.2804, R 336.2810)**

## **VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

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

NA

### **Footnotes:**

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

## FGSHAKEOUT FLEXIBLE GROUP CONDITIONS

### DESCRIPTION

This flexible group includes the shakeout operations for both production lines (LML and 1230) at the facility. The emission units in this flexible group are controlled by common baghouses.

**Emission Unit:** EULMLSO, EU1230SO

### POLLUTION CONTROL EQUIPMENT

Fabric filter collector (baghouse) control for FGSHAKEOUT includes portions Baghouses C, D, and E and vent out stacks SVC-BH, SVD-BH, and SVE-BH.

### I. EMISSION LIMIT(S) <sup>(a)</sup>

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. CO	44.57 pph	Hourly	FGSHAKEOUT	SC V.1	R 336.2804 R 336.2810
2. CO	101.88 tpy	12-month rolling time period as determined at the end of each calendar month	FGSHAKEOUT	SC VI.3	R 336.2804 R 336.2810
3. VOC	14.78 pph	Hourly	FGSHAKEOUT	SC V.1	R 336.1702 R 336.2810
4. VOC	33.79 tpy	12-month rolling time period as determined at the end of each calendar month	FGSHAKEOUT	SC VI.3	R 336.1702 R 336.2810
5. VE	10% opacity	6-minute average	FGSHAKEOUT	SC V.2	R 336.1301(1)(c) R 336.2810

<sup>(a)</sup>Stack particulate emission limits are established in FGPROCESSES.

### II. MATERIAL LIMIT(S)

NA

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

1. The permittee shall not operate FGSHAKEOUT unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the baghouses, has been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall not operate FGSHAKEOUT unless the fabric filter collectors are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate FGSHAKEOUT unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**

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

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

1. Every five years the permittee shall verify CO and VOC emission rates from FGSHAKEOUT by testing at owner's expense, in accordance with Department requirements. All associated processes must be operating similarly and at maximum routine operating conditions during the verification testing. Test results from SVAB-BH, SVC-BH, SVD-BH, and SVE-BH shall be totaled and compared to aggregate emission limits from FGMELTING, FGPOURCOOL, and FGSHAKEOUT. 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 336.1301, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings for FGSHAKEOUT a minimum of once per operating day. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions, therefore, multiple emission points may be observed simultaneously. Each visible emission check shall be taken during routine operating conditions and be a minimum of 6 minutes. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
  - a) A certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).
  - b) If the results of the Federal Reference Test Method 9 visible emission observation indicate an exceedance of the opacity standard specified in SC I.3, the permittee shall immediately initiate corrective actions. **(R 336.1301, R 336.1303)**

#### **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)&(b), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for FGSHAKEOUT on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**

3. The permittee shall calculate and keep records of monthly and 12-month rolling time period basis VOC and CO emissions for FGSHAKEOUT, to verify compliance with SC I.2 and SC I.4 using the monthly sand processing rate and emission factors in lb/ton sand processed generated from the most recent stack test conducted pursuant to SC V.1. Prior to completion of the stack test emissions may be calculated with emission factors acceptable to the AQD District Supervisor used to determine the emission limits. **(R 336.1205, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
4. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit, including records of visible emissions observations required in SC V.2. **(R 336.1205, R 336.1225, R 336.1331(c), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

**VII. REPORTING**

NA

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

Stack parameter requirements are established in FGPROCESSES.

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

**FGCORECHEM  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

This flexible group includes the Core Washing – application of VOC-containing refractory material (slurry) to the core. The core is subsequently ignited (i.e. lightoff) to dry and partially destroy the VOCs when using alcohol-based wash. Also included is Core Release – the application on an “as needed basis” of a material to promote the release of the core from the pattern.

**Emission Unit:** EUCOREWASH and EUCORERELEASE

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.31 pph	Hourly	FGCORECHEM	SC VI.2	R 336.1702(a) R 336.2804
3. VOC	2.56 tpy	12-month rolling time period as determined at the end of each calendar month	FGCORECHEM	SC VI.2	R 336.1702(a) R 336.2804

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Core Wash Material-Low VOC <sup>(a)</sup>	7,500 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EUCOREWASH	SC VI.3	R 336.1205 R 336.1225, R 336.1702(a) R 336.2810
2. Core Wash Material-Alcohol Based <sup>(b)</sup>	40,000 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EUCOREWASH	SC VI.3	R 336.1205 R 336.1225, R 336.1702(a) R 336.2810
3. IPA Thinning Solvent	6,000 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EUCOREWASH	SC VI.3	R 336.1205 R 336.1225, R 336.1702(a) R 336.2810
4. Core Release – Shell Core	480 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EUCORERELEASE	SC VI.3	R 336.1205 R 336.1225, R 336.1702(a) R 336.2810
5. Core Release – No Bake	150 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EUCORERELEASE	SC VI.3	R 336.1205 R 336.1225, R 336.1702(a) R 336.2810

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
(a) Core Wash Material- Low VOC shall have no greater than 1% VOC by weight.					
(b) Core Wash Material- Alcohol Based shall have no greater than 25% VOC by weight.					

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

1. The permittee shall capture all waste materials and solvents used in FGCORECHEM and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.2810)**
2. The permittee shall dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. **(R 336.1224, R 336.1370)**
3. The permittee shall handle all VOC and/or HAP containing materials used in FGCORECHEM, including coatings, solvents and thinners, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.2810)**
4. The permittee shall establish and implement specific procedures for the lightoff of alcohol-based core washes in a manner which minimizes the introduction of air contaminants to the outer air. **(R 336.1224, R 336.1370)**

**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))**

1. The permittee shall determine the HAP content of any wash or release agent used in FGCORECHEM as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. **(R 336.1224, R 336.1225)**
2. The permittee shall determine the VOC content, water content and density of any wash or release agent used in FGCORECHEM, as applied and as received, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's formulation data using federal Reference Test Method 24. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2810)**

**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, R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall calculate pound per hour, monthly, and 12-month rolling time period VOC emissions for FGCORECHEM. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1702, R 336.2810)**

3. The permittee shall monitor and record the material usage rate of each material listed in SC II.1 – II.4 for FGCORECHEM 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, R 336.1225, R 336.1702, R 336.2810)**
4. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. **(R 336.1225, R 336.1702, R 336.2810)**

**VII. REPORTING**

NA

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

1. The permittee shall not discharge the emissions from FGCORECHEM directly into the atmosphere. **(R 336.1205(3), R 336.1225, R 336.2803, R 336.2804)**

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

**FGNATGASUNITS  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Various natural gas combustion sources in the building. The equipment consists of ladle and furnace preheaters, infrared heaters, space heaters, air make up units, heat treat oven, and hot water boiler.

**Emission Unit:** EUMUAGEN, EUHTRFDYOFF, EUHTRSUPPOFF, EUHTROILBLD, EUBOILERS, EUFNCHEAT, EULDLHEAT, EULDLREPAIRHTR, EUDUCTHTRS, EUSHELLHEATERS

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	7.60 lb/MMscf	Instantaneous	FGNATGASUNITS	SC VI.2	R 336.1331(1)(c) R 336.2803, R 336.2804, R 336.2810
2. PM10	7.60 lb/MMscf	Instantaneous	FGNATGASUNITS	SC VI.2	R 336.2803, R 336.2804, R 336.2810
3. PM2.5	7.60 lb/MMscf	Instantaneous	FGNATGASUNITS	SC VI.2	R 336.2803, R 336.2804, R 336.2810
4. NOx	100 lb/MMscf	Instantaneous	FGNATGASUNITS	SC VI.2	R 336.2803, R 336.2804
5. CO	84 lb/MMscf	Instantaneous	FGNATGASUNITS	SC VI.2	R 336.2804, R 336.2810
6. VOCs	5.5 lb/MMscf	Instantaneous	FGNATGASUNITS	SC VI.2	R 336.1702, R 336.2804

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Natural gas usage	552.46 MMSCF per year	12-month rolling time period as determined at the end of each calendar month.	FGNATGASUNITS	SC VI.2	R 336.1225 R 336.2803, R 336.2804

3. The permittee shall burn only pipeline quality natural gas in FGNATGASUNITS. (R 336.1205(1)(a), R 336.1702, R 336.2810)

**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)&(b), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage and the permittee shall calculate the emission rates of PM, PM10, PM2.5, NOx, CO, and VOC for FGNATGASUNITS using emission factors acceptable to the AQD District Supervisor 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)&(b), R 336.1225, R 336.2803, R 336.2804, R 336.2810)**
3. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage rate of FGNATGASUNITS 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)&(b), R 336.1225, R 336.2803, R 336.2804, R 336.2810)**
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)&(b), R 336.1225, R 336.1331(c), R 336.1702, R 336.2810)**

**VII. REPORTING**

NA

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

NA

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

## FGEG FLEXIBLE GROUP CONDITIONS

### DESCRIPTION

Emergency Engines subject to 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

New/Reconstructed emergency engines ≤ 500 HP constructed on or after June 12, 2006

**Emission Unit:** EUEG1—300 KW Natural Gas-Fired Emergency Generator, EUEG2—300 KW Natural Gas-Fired Emergency Generator

### POLLUTION CONTROL EQUIPMENT

Each engine is a certified engine with associated required controls.

#### I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	2.0 g/HP-hr	Hourly	EUEG1, EUEG2	SC VI.2	40 CFR 60.4233 (e) (Table 1) R 336.2803 R 336.2804
2. CO	4.0 g/HP-hr	Hourly	EUEG1, EUEG2	SC VI.2	40 CFR 60.4233 (e) (Table 1) R 336.2804 R 336.2810
3. VOC	1.0 g/HP-hr	Hourly	EUEG1, EUEG2	SC VI.2	40 CFR 60.4233 (e) (Table 1) R 336.1702
4. PM10	0.216 pph	Hourly	EUEG1, EUEG2	SC V.2	R 336.2810
5. VOC	0.66 pph	Hourly	EUEG1, EUEG2	SC V.2	R 336.2810

#### II. MATERIAL LIMIT(S)

- The permittee shall burn only pipeline quality natural gas in FGEG. **(R 336.1205(1)(a), R 336.1702, R 336.2810, 40 CFR 60.4230)**

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

- The permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance / malfunction abatement plan (PM / MAP) for FGEG. After approval of the PM / MAP by the AQD District Supervisor, the permittee shall not operate FGEG unless the PM / MAP, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum the plan shall include:
  - Identification of the equipment and, if applicable, air-cleaning device and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair.
  - Description of the items or conditions to be inspected and frequency of the inspections or repairs.

- c) Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures.
- d) Identification of the major replacement parts that shall be maintained in inventory for quick replacement.
- e) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the plan within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the PM / MAP to be inadequate, the AQD District Supervisor may request modification of the plan to address those inadequacies. **(R 336.1205, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810)**

- 2. The permittee shall not operate each engine in FGEG for more than 150 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205(1)(a)&(b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804)**
- 3. The permittee shall not operate each engine in FGEG for more than 6 generator-hours per 24-hour time period for maintenance and/or testing. A generator-hour is defined as the sum of the actual hours of operation of each electrical generator **(40 CFR 52.21(c) and (d), R 336.1205(1)(a)&(b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804)**
- 4. The permittee may operate each engine in FGEG 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. The 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. **(40 CFR 60.4243(d)(2))**
- 5. Each engine in FGEG 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 as provided in 40 CFR 60.4243(d)(2). 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 the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4243(d)(3))**
- 6. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
  - a) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
  - b) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
  - c) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
  - d) The power is provided only to the facility itself or to support the local transmission and distribution system.
  - e) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching.**(40 CFR 60.4243(d)(3)(i))**
- 7. The permittee shall operate and maintain each engine included in FGEG such that it meets the emission limits in SC I.1, I.2, and I.3 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
- 8. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for FGEG:

- a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
- b) Keep a maintenance plan and the permittee may only change those engine settings that are permitted by the manufacturer. If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and
- c) Meet the requirements as specified in 40 CFR 1068 Subparts A through D.

If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and be subject to SC III.5. **(40 CFR 60.4243(b)(1))**

9. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for FGEG and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**

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

1. Each engine in FGEG shall be certified to meet the applicable emission standard of 40 CFR 60.4233. The permittee shall install and configure each engine according to the manufacturer's specifications. **(40 CFR 60.4243)**
2. The permittee shall equip and maintain each engine in FGEG with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a)&(b), R 336.1225, R 336.1702, R 336.2810, 40 CFR 60.4237)**
3. The nameplate capacity of each engine in FGEG shall not exceed 300 kW, as certified by the equipment manufacturer. **(R 336.1205(1)(a)&(b), 40 CFR 60.4230)**

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

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

1. If each engine included in FGEG is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
  - a) Conduct an initial performance test to demonstrate compliance with the applicable emission standards in 40 CFR 60.4233(e), within 60 days after achieving the maximum production rate at which each engine included in FGEG will be operated, but not later than 180 days after initial startup of each engine included in FGEG, or within 1 year after each engine included in FGEG is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after changing emission-related settings in a way that is not permitted by the manufacturer.
  - b) If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4244.
  - c) Conduct subsequent performance testing every 8,760 hours of engine operation or every 3 years, whichever comes first, thereafter, to demonstrate compliance with the applicable emission standards.

If a performance test is required, no less than 30 days prior to testing, a complete test plan shall be submitted 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, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)**

2. Upon request of the AQD District Supervisor, the permittee shall verify PM10 and VOC emission rates in SC I.4 and I.5 from FGEG 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, R 336.2803, R 336.2804, R 336.2810)**

**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), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall keep, in a satisfactory manner, a record of testing required in SC V.1, SC V.2, or manufacturer certification documentation indicating that each engine in FGEG meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart JJJJ. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4245)**
3. The permittee shall monitor and record the hours of operation of each engine in FGEG during emergencies and non-emergencies, on a 24-hour, monthly, 12-month rolling, and calendar year basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall record the time of operation of each engine in FGEG and the reason it was in operation during that time. **(40 CFR 52.21(c) and (d), R 336.1205(1)(a) & (3), 40 CFR 60.4243)**

**VII. REPORTING**

1. Except as provided in R 336.1285, if any engine included in FGEG is replaced with an equivalent-emitting or lower-emitting engine, the permittee shall notify the AQD District Supervisor of such change-out and submit acceptable emissions data to show that the alternate engine is equivalent-emitting or lower-emitting. The data shall be submitted within 30-days of the engine change out. **(R 336.1205, R 336.1702(a), R 336.1911, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall submit the following notifications if any engine included in FGEG is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4243(d)(3)(i) the permittee must submit an annual report including the following:
  - a) The 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 spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine; **(40 CFR 60.4245(e), 40 CFR Part 60 Subparts A and JJJJ)**
3. The permittee shall submit a notification specifying whether each engine included in FGEG 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. **(R 336.1201(3))**

**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. SVEG1	56.6	8.75	R 336.1225, R 336.2803, R 336.2804
2. SVEG2	56.6	8.75	R 336.1225, R 336.2803, R 336.2804

**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 JJJJ, as they apply to FGEG. **(40 CFR Part 60 Subparts A & JJJJ, 40 CFR 63.6590)**
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 FGEG, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

**Footnotes:**

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

**FGMACTZZZZZ  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

The new affected source is a new iron foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The annual metal melting capacity is greater than 10,000 tons, therefore this area source is a large foundry.

**Emission Unit:** EUCHRGHAND, EUDUCTINOC, EUMLTXFER, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EULMLPC, EULMLSO, EU1230PC, EU1230SO, EUSHMM, EUBLAST, EUGRIND, EUPUNBCM, EUSHELLCM, EUCOREWASH, EUCORERELEASE, EULDLREPAIR, EUWASTESAND, EUFNCHEAT, EULDLHEAT, EULDLREPAIRHTR, EUDUCTHTRS, EUSHELLHEATERS

**POLLUTION CONTROL EQUIPMENT**

Fabric filter collector (baghouse) control includes Baghouses A and B then vented to stack SVAB-BH.

**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. VE (fugitive emissions from foundry operations)	20 percent opacity 6-min average, except for one 6-min average per hour that does not exceed 30 percent	Hourly	Each Building or Structure Housing Any Foundry Operation at FGMACTZZZZZ	SC V.2	40CFR 63.10895 (e)
3. PM ---OR--- Total Metal HAP	0.1 pounds of PM per ton of metal charged  ---OR--- 0.008 pounds of total metal HAP per ton of metal charged.	Hourly	EUEIF1 EUEIF2 EUEIF3 EUEIF4 each furnace	SC V.1	40CFR 63.10895 (c)(2)

**II. MATERIAL LIMIT(S)**

1. If applicable, the permittee shall not utilize a binder chemical formulation that uses methanol as a specific ingredient of the catalyst formulation for a warm box mold or core making line. This requirement does not apply to the resin portion of the binder system. **(40 CFR 63.10886)**
2. The permittee will not accept motor vehicle scrap. The permittee must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap. **(40 CFR 63.10885(b)(4))**

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

1. For each segregated metallic scrap storage area, bin or pile, the permittee must comply with the materials acquisition requirements in described in 40 CFR 63.10885(a). The permittee must keep a copy of the material specifications onsite and readily available to all personnel with material acquisition duties and provide a copy to each of your scrap providers. **(40 CFR 63.10885(a))**
  - a) The permittee must prepare and operate at all times according to written material specifications for the purchase and use of only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, chlorinated plastics, or free liquids. "Free liquids" is defined as material that fails the paint filter test by EPA Method 9095B, "Paint Filter Liquids Test" (revision 2), November 2004 (incorporated by reference—see §63.14). The requirements for no free liquids do not apply if the owner or operator can demonstrate that the free liquid is water that resulted from scrap exposure to rain. **(40 CFR 63.10885(a)(1))**
  - b) The permittee must prepare and operate at all times according to written material specifications for the purchase and use of only iron and steel scrap that has been depleted (to the extent practicable) of organics and HAP metals in the charge materials used by the iron and steel foundry. The materials specifications must include at minimum: **(40 CFR 63.10885(a)(2))**
    - i. Specifications for metallic scrap materials charged to a scrap preheater or metal melting furnace to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids. **(40 CFR 63.10885(a)(2)(i))**
2. The permittee must prepare and operate at all times according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in §63.10895. The permittee must maintain a copy of the O&M plan at the facility and make it available for review upon request. At a minimum, each plan must contain the following information **(40 CFR 63.10896(a))**:
  - a) General facility and contact information;
  - b) Positions responsible for inspecting, maintaining, and repairing emissions control devices which are used to comply with this subpart;
  - c) Description of items, equipment, and conditions that will be inspected, including an inspection schedule for the items, equipment, and conditions. For baghouses that are equipped with bag leak detection systems, the O&M plan must include the site-specific monitoring plan required in 40 CFR 63.10897(d)(2).
  - d) Identity and estimated quantity of the replacement parts that will be maintained in inventory; and
  - e) For a new affected source, procedures for operating and maintaining a CPMS in accordance with manufacturer's specifications.
3. The permittee must install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse on melting. The permittee must install, operate, and maintain each bag leak detection system according to the requirements listed in paragraphs (d)(1) through (3) of 40 CFR 63.10897. **(40 CFR 63.10897(d))**
4. The permittee must make monthly inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The permittee must repair any defect or deficiency in the capture system as soon as practicable, but no later than 90 days. You must record the date and results of each inspection and the date of repair of any defect or deficiency. **(40 CFR 63.10897(e))**
5. The permittee must install, operate, and maintain each CPMS or other measurement device according to your O&M plan. You must record all information needed to document conformance with these requirements. **(40 CFR 63.10897(f))**
6. In the event of an exceedance of an established emissions limitation (including an operating limit), the permittee must restore operation of the emissions source (including the control device and associated capture system) to its normal or usual manner or operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the exceedance. The permittee must record the date and time correction

action was initiated, the correction action taken, and the date corrective action was completed. **(40 CFR 63.10897(g))**

7. If you choose to comply with an emissions limit in §63.10895(c) using emissions averaging, the permittee must calculate and record for each calendar month the pounds of PM or total metal HAP per ton of Metal Charged from the group of all metal melting furnaces at your foundry. The permittee must calculate and record the weighted average pounds per ton emissions rate for the group of all metal melting furnaces at the foundry determined from the performance test procedures in §63.10898(d) and (e). **(40 CFR 63.10897(h))**

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

1. The permittee must operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group. Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists. **(40 CFR 63.10895(b))**

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

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

1. The permittee shall conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emissions limits in 40 CFR 63.10895 for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years and each time the permittee elects to change an operating limit or make a process change likely to increase HAP emissions. The permittee shall conduct the performance tests as specified in Table 1 of 40 CFR Part 63 Subpart ZZZZZ. 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. **(40 CFR 63.10898)**
2. The permittee shall conduct each opacity test for fugitive emissions according to the requirements in §63.6(h)(5) and Table 1 of 40 CFR Part 63 Subpart ZZZZZ. The permittee shall conduct subsequent performance tests to demonstrate compliance with the opacity limit in §63.10895 no less frequently than every 6 months and each time the permittee makes a process change likely to increase fugitive emissions. 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. **(40 CFR 63.10898)**

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche. **(40 CFR 63.10899(a))**
2. In addition to the records required by 40 CFR 63.10, the permittee must keep records of the information as specified below **(40 CFR 63.10899(b))**:
  - a) The permittee must keep records of your written materials specifications according to 40 CFR 63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in 40 CFR 63.10885(a)(1) and/or for the use of general scrap in 40 CFR 63.10885(a)(2) and for mercury in 40 CFR 63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with 40 CFR 63.10885(b)(4) for scrap that does not contain motor vehicle scrap. **(40 CFR 63.10899(b)(1))**
  - b) If the permittee is subject to the requirements for a site-specific plan for mercury under 40 CFR 63.10885(b)(1), you must **(40 CFR 63.10899(b)(2))**:

- i. Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and
- ii. Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under 40 CFR 63.10885(b)(1)(ii)(C). You must identify which option in 40 CFR 63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (c) of this section.
- c) If the permittee is subject to the option for approved mercury programs under 40 CFR 63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If your scrap provider is a broker, you must maintain records identifying each of the broker's scrap suppliers and documenting the scrap supplier's participation in an approved mercury switch removal program. **(40 CFR 63.10899(b)(3))**
- d) The permittee must keep records to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by 40 CFR 63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet. **(40 CFR 63.10899(b)(4))**
- e) The permittee must keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provide information on the binder or coating materials used. **(40 CFR 63.10899(b)(5))**
- f) The permittee must keep records of monthly metal melt production for each calendar year. **(40 CFR 63.10899(b)(6))**
- g) The permittee must keep a copy of the operation and maintenance plan as required by 40 CFR 63.10896(a) and records that demonstrate compliance with plan requirements. **(40 CFR 63.10899(b)(7))**
- h) If you use emissions averaging, the permittee must keep records of the monthly metal melting rate for each furnace at your iron and steel foundry, and records of the calculated pounds of PM or total metal HAP per ton of Metal Charged for the group of all metal melting furnaces required by §63.10897(h). **(40 CFR 63.10899(b)(8))**
- i) If applicable, the permittee must keep records for bag leak detection systems as follows **(40 CFR 63.10899(b)(9))**:
  - i. Records of the bag leak detection system output;
  - ii. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
  - iii. The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.
- j) The permittee must keep records of capture system inspections and repairs as required by 40 CFR 63.10897(e). **(40 CFR 63.10899(b)(10))**
- k) The permittee must keep records demonstrating conformance with your specifications for the operation of CPMS as required by 40 CFR 63.10897(f). **(40 CFR 63.10899(b)(11))**
- l) The permittee must keep records of corrective action(s) for exceedances and excursions as required by 40 CFR 63.10897(g). **(40 CFR 63.10899(b)(12))**
- m) The permittee must record the results of each inspection and maintenance required by 40 CFR 63.10897(a) for PM control devices in a logbook (written or electronic format). The permittee must keep the logbook onsite and make the logbook available to the Administrator upon request. You must keep records of the information specified below **(40 CFR 63.10899(b)(13))**:
  - i. The date and time of each recorded action for a fabric filter, the results of each inspection, and the results of any maintenance performed on the bag filters.
  - ii. The date and time of each recorded action for a wet or dry electrostatic precipitator (including ductwork), the results of each inspection, and the results of any maintenance performed for the electrostatic precipitator.

- iii. The date and time of each recorded action for a wet scrubber (including ductwork), the results of each inspection, and the results of any maintenance performed on the wet scrubber.

## **VII. REPORTING**

1. The permittee must submit semiannual compliance reports to the Administrator according to the requirements in 40 CFR 63.10(e). The reports must include, at a minimum, the following information as applicable **(40 CFR 63.10899(c))**:
  - a) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;
  - b) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and
  - c) Summary information on any deviation from the pollution prevention management practices in 40 CFR 63.10885 and 40 CFR 63.10886 and the operation and maintenance requirements 40 CFR 63.10896 and the corrective action taken.

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

NA

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

NA

### **Footnotes:**

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

## FGPROCESSES FLEXIBLE GROUP CONDITIONS

**DESCRIPTION**

All equipment routed to baghouses A, B, C, D, E, F, G, H, J, K, and L

**Emission Unit:** EUCHRGHAND, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EUDUCTINOC, EUMLTXFER, EULMLPC, EULMLSO, EU1230PC, EU1230SO, EUSHMM , EUBLAST, EUGRIND, EUPUNBCM, EUSHELLCM, EULDLREPAIR, EUWASTESAND

**POLLUTION CONTROL EQUIPMENT**

All equipment is routed to one or more of the fabric filter collectors (baghouses). (Baghouses A, B, C, D, E, F, G, H, J, K, L)

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.80 lb/ton metal charged	Hourly	EUCHRGHAND, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EUDUCTINOC, EUMLTXFER, EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVAB-BH, SVC- BH, SVD-BH, and SVE-BH	SC V.1	R 336.1205(1)(a) and (3) R 336.2810
2. CO	8.45 lb/ton metal charged	Hourly	EUCHRGHAND, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EUDUCTINOC, EUMLTXFER, EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVAB-BH, SVC- BH, SVD-BH, and SVE-BH	SC V.1	R 336.1205(1)(a) and (3) R 336.2810

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
3. PM/PM10/ PM2.5	0.003 gr/dscf	Hourly	EUCHRGHAND, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EUDUCTINOC, EUMLTXFER, EULMLPC, EU1230PC emissions exhausted through SVAB-BH	SC V.1	R 336.1331(1)(c) R 336.2804
4. PM	3.41 pph	Hourly	EUCHRGHAND, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EUDUCTINOC, EUMLTXFER, EULMLPC, EU1230PC emissions exhausted through SVAB-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
5. PM10	3.41 pph	Hourly	EUCHRGHAND, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EUDUCTINOC, EUMLTXFER, EULMLPC, EU1230PC emissions exhausted through SVAB-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
6. PM2.5	3.41 pph	Hourly	EUCHRGHAND, EUEIF1, EUEIF2, EUEIF3, EUEIF4, EUDUCTINOC, EUMLTXFER, EULMLPC, EU1230PC emissions exhausted through SVAB-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
7. PM/PM10/ PM2.5	0.002 gr/dscf	Hourly	EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVC-BH	SC V.1	R 336.1331(1)(c) R 336.2804
8. PM	1.70 pph	Hourly	EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVC-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810

<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>
9. PM10	1.70 pph	Hourly	EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVC-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
10. PM2.5	1.70 pph	Hourly	EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVC-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
11. PM/PM10/ PM2.5	0.003 gr/dscf	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVD-BH	SC V.1	R 336.1331(1)(c) R 336.2804
12. PM	1.70 pph	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVD-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
13. PM10	1.70 pph	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVD-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
14. PM2.5	1.70 pph	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVD-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
15. PM/PM10/ PM2.5	0.002 gr/dscf	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVE-BH	SC V.1	R 336.1331(1)(c) R 336.2804

<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>
16. PM	1.04 pph	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVE-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
17. PM10	1.04 pph	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVE-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
18. PM2.5	1.04 pph	Hourly	EULMLPC, EU1230PC, EULMLSO, EU1230SO, EUSHMM emissions exhausted through SVE-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
19. PM/PM10/ PM2.5	0.002 gr/dscf	Hourly	EUSHMM emissions exhausted through SVF-BH	SC V.1	R 336.1331(1)(c) R 336.2804
20. PM	1.04 pph	Hourly	EUSHMM emissions exhausted through SVF-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
21. PM10	1.04 pph	Hourly	EUSHMM emissions exhausted through SVF-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
22. PM2.5	1.04 pph	Hourly	EUSHMM emissions exhausted through SVF-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
23. PM/PM10/ PM2.5	0.002 gr/dscf	Hourly	EUSHMM, EUPUNBCM emissions exhausted through SVG-BH	SC V.1	R 336.1331(1)(c) R 336.2804
24. PM	0.68 pph	Hourly	EUSHMM, EUPUNBCM emissions exhausted through SVG-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
25. PM10	0.68 pph	Hourly	EUSHMM, EUPUNBCM emissions exhausted through SVG-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810

<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>
26. PM2.5	0.68 pph	Hourly	EUSHMM, EUPUNBCM emissions exhausted through SVG-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
27. PM/PM10/ PM2.5	0.001 gr/dscf	Hourly	EUCHRGHAND, EUBLAST, EUGRIND, EUWASTESAND emissions exhausted through SVHJ-BH	SC V.1	R 336.1331(1)(c) R 336.2804
28. PM	1.70 pph	Hourly	EUCHRGHAND, EUBLAST, EUGRIND, EUWASTESAND emissions exhausted through SVHJ-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
29. PM10	1.70 pph	Hourly	EUCHRGHAND, EUBLAST, EUGRIND, EUWASTESAND emissions exhausted through SVHJ-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
30. PM2.5	1.70 pph	Hourly	EUCHRGHAND, EUBLAST, EUGRIND, EUWASTESAND emissions exhausted through SVHJ-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
31. PM/PM10/ PM2.5	0.002 gr/dscf	Hourly	EUCHRGHAND, EULDLREPAIR emissions exhausted through SVK-BH	SC V.1	R 336.1331(1)(c) R 336.2804
32. PM	0.34 pph	Hourly	EUCHRGHAND, EULDLREPAIR emissions exhausted through SVK-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
33. PM10	0.34 pph	Hourly	EUCHRGHAND, EULDLREPAIR emissions exhausted through SVK-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
34. PM2.5	0.34 pph	Hourly	EUCHRGHAND, EULDLREPAIR emissions exhausted through SVK-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
35. PM/PM10/ PM2.5	0.002 gr/dscf	Hourly	EUPUNBCM, EUSHELLCM emissions exhausted through SVL-BH	SC V.1	R 336.1331(1)(c) R 336.2804
36. PM	0.34 pph	Hourly	EUPUNBCM, EUSHELLCM emissions exhausted through SVL-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
37. PM10	0.34 pph	Hourly	EUPUNBCM, EUSHELLCM emissions exhausted through SVL-BH	SC V.1	R 336.2803 R 336.2804 R 336.2810
38. PM2.5	0.34 pph	Hourly	EUPUNBCM, EUSHELLCM emissions exhausted through SVL-BH L	SC V.1	R 336.2803 R 336.2804 R 336.2810

**II. MATERIAL LIMIT(S)**

NA

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

1. The permittee shall not operate FGPROCESSES unless a malfunction abatement plan (MAP) as described in Rule 911(2), for FGPROCESSES, has been submitted within 60 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1331, R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall not operate any equipment in FGPROCESSES unless each fabric filter collector is installed, maintained, and operated in accordance with the manufacturer’s recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**
3. The permittee shall not operate any equipment in FGPROCESSES unless a gauge, which measures the pressure drop across each fabric filter collector and sounds an alarm when the pressure drop exceeds the

operating range established in the MAP, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**

#### **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))**

1. Every five years the permittee shall verify PM, PM10, and PM2.5 emission rates and CO and VOC emission rates as applicable, from baghouse stacks SVAB-BH, SVC-BH, SVD-BH, SVE-BH, SVF-BH, SVG-BH, and SVHJ-BH listed in FGPROCESSES 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, R 336.2803, R 336.2804, R 336.2810)**
2. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates and CO and VOC emission rates as applicable, from baghouse stacks SVK-BH and SVL-BH listed in FGPROCESSES 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, R 336.2803, R 336.2804, R 336.2810)**

#### **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. **(R336.1205, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall monitor and record, in a satisfactory manner, CO and VOC emission calculations determining the emission rates in lb per ton of metal charged from Baghouses A, B, C, D, and E. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R336.1205, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
3. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each baghouse for FGPROCESSES on a once per operating shift basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1910, R 336.2810)**

#### **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. SVAB-BH	101.4	120	R 336.1225, R 336.2803, R 336.2804
1. SVC-BH	80.2	155	R 336.1225, R 336.2803, R 336.2804
1. SVD-BH	71.6	155	R 336.1225, R 336.2803, R 336.2804
1. SVE-BH	63	155	R 336.1225, R 336.2803, R 336.2804
1. SVF-BH	63	155	R 336.1225, R 336.2803, R 336.2804
1. SVG-BH	50.8	135	R 336.1225, R 336.2803, R 336.2804
1. SVHJ-BH	113.3	120	R 336.1225, R 336.2803, R 336.2804
1. SVK-BH	36	86	R 336.1225, R 336.2803, R 336.2804
1. SVL-BH	36	71	R 336.1225, R 336.2803, R 336.2804

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

## FGFACILITY CONDITIONS

### DESCRIPTION:

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

### POLLUTION CONTROL EQUIPMENT

Fabric filter collector (baghouse) control. (Baghouses A, B, C, D, E, F, G, H, J, K, L)

#### I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Each Individual HAP	Less than 9.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(1)(a)
2. Aggregate HAPs	Less than 24.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(1)(a)
3. Arsenic	5.65 lb/yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)
4. Cadmium	6.25 lb/yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)
5. Cobalt and Cobalt Compounds	10.51 lb/yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)
6. Nickel	55.41 lb/yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)
7. Acetaldehyde	7.52 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)
8. Benzene	7.84 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)
9. Formaldehyde	3.60 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
10. Naphthalene	2.10 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1225(2)

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Metal Charged	128,000 tons per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(1)(b) R 336.1205(3) R 336.2803 R 336.2804 R 336.2810
2. Sand Processed	1,920,000 tons per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(1)(b) R 336.1205(3) R 336.2803 R 336.2804 R 336.2810
3. Resin Binder/Catalyst Processed	50 tons per year	12-month rolling time period as determined at the end of each calendar month	EUPUNBCM, EUSHELLCM	SC VI.2	R 336.1205(1)(b) R 336.1205(3) R 336.1702 R 336.2803 R 336.2804 R 336.2810

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

- The permittee shall not operate FGFACILITY unless a Fugitive Dust Control Plan (FDCP) for fugitive dust for all plant roadways, the plant yard, all material storage piles, and all material handling operations, as specified in Appendix A, has been implemented and is maintained. The permittee shall amend the FDCP within 45 days upon request from the District Supervisor. The permittee shall submit the FDCP and any amendments to the FDCP to the AQD District Supervisor for review and approval. The permittee may also propose revisions to the FDCP by submitting a request to the AQD District Supervisor. If the AQD does not notify the permittee within 90 days of submittal, the FDCP or amended FDCP shall be considered approved. The permittee shall keep all records on file and make them available to the Department upon request (R 336.1371, R 336.1372, Act 451 324.5524, R 336.2803, R 336.2804, R 336.2810)
- The permittee shall not operate FGFACILITY for more than 6,000 hours per 12-month rolling time period as determined at the end of each calendar month. (R 336.1224, R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)

**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 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(3), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall keep the following information on a monthly basis for FGFACILITY:
  - d) Total Metal Charged, tons/year, based upon a 12-month rolling time period as determined at the end of each calendar month.
  - e) Lake sand processed, tons/year, based upon a 12-month rolling time period as determined at the end of each calendar month.
  - f) Resin binder/catalyst processed, tons/year, based upon a 12-month rolling time period as determined at the end of each calendar month.
  - g) Natural gas usage, cubic foot/year, based upon a 12-month rolling time period as determined at the end of each calendar month.
  - e) Hours of operation for FGFACILITY based upon a 12-month rolling time period as determined at the end of each calendar month.
  - f) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
  - g) Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, for a period of at least five years and make them available to the Department upon request. **(R336.1205(1)(b), R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall calculate Arsenic, Cadmium, Cobalt and Cobalt Compounds, Nickel, Acetaldehyde, Benzene, Formaldehyde, and Naphthalene emission rates from FGFACILITY for each calendar month and rolling 12-month time period using a method acceptable to the AQD District Supervisor.<sup>1</sup> **(R 336.1225(2))**

## **VII. REPORTING**

NA

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

NA

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

NA

### **Footnotes:**

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

## Appendix A

### FUGITIVE DUST CONTROL PLAN

**PURPOSE:** This plan provides dust control strategies for the areas adjacent to and associated with the equipment operations. Regarding truck loads (item 3.), large metal items, either incoming scrap metal or outgoing products are unlikely sources of fugitive dust and covered loads are not mandatory.

#### 1. SITE MAINTENANCE

- a) Dust on all areas where vehicular traffic will travel shall be controlled by the application of water, sweeping, vacuuming, or other acceptable dust control method. This will occur a minimum of once per month or more frequently as dictated by weather conditions and vehicular activity. The dust control method shall be acceptable as determined by the District Supervisor.
- b) The speed of vehicles on the site will be limited to 10 miles per hour or less. Signs will be posted to advise drivers of the speed limitation.

#### 2. MANAGEMENT OF ON-SITE ROADWAYS

- a) All the roadways on which the haul vehicles will travel are paved.
- b) The paved plant roads shall be controlled by the application of water, sweeping, vacuuming, or other acceptable dust control method that minimizes the introduction of the dust to the ambient air to control fugitive dust emissions and track-out dust. This will occur a minimum of once per month or more frequently as dictated by weather conditions and vehicular activity. The dust control method shall be acceptable as determined by the District Supervisor.

#### 3. ON-SITE MANAGEMENT OF HAUL VEHICLES

- a) **INCOMING TRUCKS:** Trucks entering the site shall control fugitive dust from the loads as needed.
- b) **OUT-GOING TRUCKS:** All trucks leaving the site shall control fugitive dust from the loads as needed prior to leaving the site. A sign shall be posted to advise drivers of this requirement.

#### 4. MANAGEMENT OF FRONT-END LOADER OPERATIONS

If a loader is used, the front-end loader operator shall be directed to minimize the drop height of the material.

#### 5. RECORDKEEPING

Records of dust control activities on travel surfaces and other surfaces where fugitive dust emissions occur shall be kept on file and made available to EGLE staff upon request. The records will indicate the date, time, what was observed or the reason for the dust control activity (routine or other), and what action was taken.

#### 6. FUGITIVE EMISSIONS FROM PROCESS EQUIPMENT AND FABRIC FILTER DUST COLLECTOR

Any fugitive emissions from leak(s) and malfunction(s) from any transfer system, storage bin, mixer, hopper, or fabric filter dust collector shall be immediately corrected to prevent further fugitive emissions.