

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

July 27, 2018

PERMIT TO INSTALL
95-01G

ISSUED TO
Eagle Alloy, Inc.

LOCATED AT
5142 Evanston Avenue
Muskegon, Michigan

IN THE COUNTY OF
Muskegon

STATE REGISTRATION NUMBER
B7870

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

January 29, 2018

DATE PERMIT TO INSTALL APPROVED:

July 27, 2018

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

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

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

GENERAL CONDITIONS

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

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

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

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

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU01	19 Total Mold Machines with Process Heaters 7 @ 1.25 mmBtu/hr 12 @ 0.50 mmBtu/hr Stack ID: None	01/04/1983	FG01
EU03	20 Total Core Machines with Process Heaters 10 @ 0.55 mmBtu/hr 10 @ 0.315 mmBtu/hr Stack ID: None	01/04/1983	FG01
EU05	Pre-Shakeout – Manual casting knock out at end of cooling tunnels. Dust collectors venting inside shared with EU06	01/04/1983	FG01
EU06	Air Set Sand Mixer. Dust Collector venting inside - shared with EU05 Stack ID: None	01/04/1983	FG01
EU07	Panel A - (1750 kw) panel with 3 (5000-lb) pots. Furnaces 1A, 2A, and 3A Maximum 2 pots operate at a time Stack ID: None	11/19/1998 / PTI Issuance Date	FG02
EU07A	Panel B - (1500 kw) panel with 3 (5000-lb) pots. Furnaces 4B, 5B, and 6B Maximum 1 pot operates at a time Stack ID: None	11/19/1998 / PTI Issuance Date	FG02
EU08	Panel C - (1750 kw) Panel with 3 (5000-lb) Pots. Furnaces 7C, 8C, and 9C Maximum 2 pots operate at a time. Stack ID: None	01/04/1983 / PTI Issuance Date	FG02
EU08A	Panel D - (1750 kw) panel with 3 (5000-lb) pots and 1 (1000-lb) pot. Furnaces 10D, 11D, 12D, and 13D Maximum 2 pots operate at a time. Stack ID: None	02/08/2012 / PTI Issuance Date	FG02
EU09	1 Shotblast Machine 10,700 CFM cartridge Dust Collector – Shipping Blast 1 Stack ID: SV01	01/04/1983	FG05
EU10	1 Shotblast 10,700 CFM Cartridge Dust Collector – Shipping Blast 2 & Tumble blast Stack ID: SV01	01/04/1983	FG05
EU11	Assorted air powered hand tools Stack ID: None	01/04/1983	FG05
EU12	Snag Grinders with drop out boxes Stack ID: None	01/04/1983	FG05

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU13	Belt Grinders with drop out boxes Stack ID: None	01/04/1983	FG05
EU14	Oxygen Torches Stack ID: None	01/04/1983	FG05
EU15	Arc Welders Stack ID: None	01/04/1983	FG05
EU16	Sand Transport. 26,500 CFM Cartridge Dust Collector Stack ID: SV02	01/19/1986	FG06
EU17	Shotblast Machines, 2 Sand Separators, 1 80- ton sand silo, and 1 Sand Mold Scrubber. 26,500 CFM Cartridge Dust Collector Stack ID: SV02	02/19/1986	FG06
EU19	1 Autoclave Boiler rated at 0.84 mm Btu/hr, natural or landfill gas-fired Stack ID: Combustion Exhaust and Steam Release Stack	05/01/1992	FG07
EU20	6 Ceramic Dip Tank Systems. Dust Collector. (Discharge in-plant)	05/01/1992	FG07
EU22	6 Mueller Phipps Wax Injection Machines Stack ID: None	05/01/1992	FG07
EU23	Assorted Mold Dip-Tanks Stack ID: None	05/01/1992	FG07
EU24	2 (250 kw) Induction Furnaces, 2 (1,000-lb) Pot, 1 (400-lb) Pot, and 1 (500-lb) Pot Stack ID: None	05/01/1992	FG08
EU25	3 Preheat Ovens with total of 1,950,000 Btu/hr, natural or landfill gas-fired Stack ID: Each Preheat Oven has a Stack with Afterburner	05/01/1992	FG08
EU27	2 Sand Blasters. 1,400 CFM Dust Collector Stack ID: SV03	05/01/1992	FG09
EU28	1 Finishing Machine. 1,400 CFM Dust Collector Stack ID: SV03	05/01/1992	FG09
EU29	1 Blasting Unit. 1,400 CFM Dust Collector Stack ID: SV03	05/01/1992	FG09
EU30	4 Belt Grinders Stack ID: None	05/01/1992	FG09
EU31	1 Knockout Machine, 1 Spinblaster, 1800 CFM Dust Collector – No Stack, 1 Rise & Fall with built in Bag Collector – No Stack, 1 Blast Unit, 600 CFM Dust Collector – No Stack. Stack ID: None	05/01/1992	FG09
EU32	Assorted Bench Grinders and Hand Held Air Tools Stack ID: None	05/01/1992	FG09

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU35	2 Plasma Cutters, and 2 Bandsaws 1 Arc Welding Machine, 2 Plasma Torches, and 1 Bandsaw Stack ID: None	05/01/1992	FG09
EU36	7 Heat Treat Ovens—3 @ 3,600,000 Btu/hr and 4 @ 3,000,000 Btu/hr landfill gas-fired Stack ID: None	05/01/1992	FG09
EU37	1 Leach Tank Stack ID: None	05/01/1992	FG09
EU43	Phenolic Shell Sand Thermal Reclamation System with Particulates Controlled by a bag house. Stack ID: SVTHERMREC	09/09/2011	NA
EU44	Sand Coating Plant. Sand Coating System capable of coating new or reclaimed sand. Particulates controlled by a dust collector and organic emissions captured and controlled by thermal oxidizer. Stack IDs: SVTHERMOX and SVSANDPLANT	09/09/2011	NA
EUSHAKEOUT	Shakeout operation. Didion tumbler and ancillary equipment with Didion Dust Collector venting outside. WH200 Dust Collector venting outside also associated with operation.	01/01/2006	NA
EUPOURCASTCOOL	Pouring/casting and cooling system.	01/04/1983	FG03
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to:
EU23

DESCRIPTION: Assorted Mold Dip Tanks

Flexible Group ID: FG07, FGFACILITY

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

1. Visible emissions from EU23 shall not exceed 10% opacity. **(R 336.1301(1)(c))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EU24

DESCRIPTION: 2 (250 kw) Induction Furnaces, 2 (1,000-lb) Pot, 1 (400-lb) Pot, and 1 (500-lb) Pot

Flexible Group ID: FG08, FGFACILITY

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

1. Visible emissions from EU24 shall not exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 30 percent. **(40 CFR §63.10895(e))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EU43

DESCRIPTION: Phenolic Shell Sand Thermal Reclamation System with particulates controlled by a bag house.

Flexible Group ID: FGFACILITY

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.010 lbs per 1000 lbs of gas	Test Protocol	EU43	SC V.1	R 336.1331
2. PM10	1.12 pph	Test Protocol	EU43	SC V.1	40 CFR 52.21 (c)&(d)
3. PM2.5	1.12 pph	Test Protocol	EU43	SC V.1	R 336.2804, 40 CFR 52.21 (d)
4. VOCs	1.83 pph	Test Protocol	EU43	SC V.1	R 336.1702

5. Visible emissions from EU43 shall not exceed a six-minute average of 5 percent opacity. **(R 336.1301, R 336.1331)**

II. MATERIAL LIMITS

1. The sand throughput rate for EU43 shall not exceed a maximum of 4.25 tons per hour. **(R 336.1205, R 336.1225, R 336.1702, 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU43 unless a minimum temperature of 1150°F is maintained in the combustion chamber. **(R 336.1205, R 336.1225, R 336.1702, R 336.1910)**
2. The permittee shall not operate EU43 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for thermal reclamation baghouse, 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, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a temperature monitoring device to monitor and record the temperature in the combustion chamber of EU43 on a continuous basis. **(R 336.1205, R 336.1225, R 336.1702)**
2. The permittee shall not operate EU43 unless the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

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

1. Within 90 days after permit issuance, the permittee shall verify opacity, PM, PM10, PM2.5, and VOC emission rates from EU43 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. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th 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 336.1301, R 336.1331, R 336.1702, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**
2. The permittee shall monitor and record, in a satisfactory manner, the sand throughput rate of EU43 on an hourly 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 336.1301, R 336.1331, R 336.1702, R 336.1911, 40 CFR 52.21(c) and (d))**
3. The permittee shall monitor and record, in a satisfactory manner, the temperature in the combustion chamber of EU43 on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. 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)**
4. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor the pressure drop across the baghouse on a continuous basis. The device shall be equipped with an audible alarm that will sound when the pressure drop is outside of the range specified in an approved MAP as required in SC III.1. The permittee shall record the pressure drop across the baghouse on a daily basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVTHERMREC	32	40	R 336.1225, 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EU44

DESCRIPTION: Sand Coating Plant. Reclaimed sand or new sand is transferred from the storage silo to a sand heater, then combined with resin and additives in a batch pug mill and then fed into a continuous mixer. After the mixer, the recoated sand is fed through a triple deck vibratory screener and cooled before it is then fed through an additional screener. Particulate emissions generated from the silo to the pugmill are controlled with a bag house. Organic emissions from the sand coating operation, including hazardous air pollutants are controlled with a thermal oxidizer.

Flexible Group ID: FGFACILITY

POLLUTION CONTROL EQUIPMENT: Baghouse and Thermal Oxidizer

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.010 lbs per 1000 lbs of gas	Test Protocol	EU44	SC V.1	R 336.1331
2. PM10	0.95 pph	Test Protocol	EU44	SC V.1	40 CFR 52.21 (c) & (d)
3. PM2.5	0.95 pph	Test Protocol	EU44	SC V.1	R 336.2804, 40 CFR 52.21 (d)
4. VOCs	4.6 pph	Test Protocol	EU44	SC V.2 SC V.3	R 336.1702
5. Formaldehyde	0.09 pph ¹	Test Protocol	EU44	GC 13	R 336.1225
6. Phenol	1.30 pph ¹	Test Protocol	EU44	GC 13	R 336.1225

7. Visible emissions from EU44 shall not exceed a six-minute average of 5 percent opacity. **(R 336.1301, R 336.1331)**

II. MATERIAL LIMITS

1. The sand throughput rate for EU44 shall not exceed a maximum of 10 tons per hour. **(R 336.1205, R 336.1225, R 336.1702, 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU44 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the baghouse and thermal oxidizer, 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 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU44 unless the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes a minimum VOC capture efficiency of 90 percent (by weight), a minimum VOC destruction efficiency of 95 percent (by weight), and maintaining a minimum temperature of 1300°F and a minimum retention time of 0.5 seconds. **(R 336.1205, R 336.1225, R 336.1702, R 336.1910)**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a temperature monitoring device in the combustion chamber of the thermal oxidizer to monitor and record the temperature on a continuous basis, during operation of EU44. **(R 336.1205, R 336.1225, R 336.1702)**
3. The permittee shall not operate EU44 unless the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

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

1. Within 90 days after permit issuance, the permittee shall verify opacity, PM, PM10, PM2.5, emission rates from the baghouse portion of EU44 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. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1299, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**
2. Within 90 days after permit issuance, the permittee shall verify the VOC emission rate from the thermal oxidizer portion of EU44 by testing at owner's expense, in accordance with Department requirements. Two years following the initial emissions test the permittee shall re-verify the VOC emission rate from the thermal oxidizer portion of EU44 by testing at the owner's expense, in accordance with Department requirements. Thereafter the permittee shall verify the VOC emission rate from the thermal oxidizer portion of EU44 every two years, unless the permittee can demonstrate, to the satisfaction of the AQD District Supervisor, that the thermal oxidizer has been operated and maintained to retain the permitted destruction efficiency. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1299, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th 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 336.1301, R 336.1331, R 336.1702, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

2. The permittee shall monitor and record, in a satisfactory manner, the sand throughput rate of EU44 on an hourly 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 336.1301, R 336.1331, R 336.1702, R 336.1911, 40 CFR 52.21(c) and (d))**
3. The permittee shall monitor and record, in a satisfactory manner, the temperature in the thermal oxidizer on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. 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)**
4. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor the pressure drop across the baghouse on a continuous basis. The device shall be equipped with an audible alarm that will sound when the pressure drop is outside of the range specified in an approved MAP as required in SC III.1. The permittee shall record the pressure drop across the baghouse on a daily basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVTHERMOX	32	78.25	R 336.1225, 40 CFR 52.21 (c) and (d)
2. SVSANDPLANT	34	43	R 336.1225, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to:
EUSHAKEOUT

DESCRIPTION: Shakeout operation. Didion tumbler and ancillary equipment with Didion Dust Collector venting outside. WH200 Dust Collector venting outside also associated with operation.

Flexible Group ID: FGFACILITY

POLLUTION CONTROL EQUIPMENT: 2 Dust Collectors: Didion Collector and WH200 Dust Collector, both vent outside.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. Applicant shall not operate the EUSHAKEOUT unless the associated dust collector is installed and operating properly. **(R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The pressure drop across the dust collector shall be monitored according to its manufacturer's specifications. **(R 336.1331, R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

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
FG01	Sand Mold and Core System	EU01, EU03, EU05, EU06
FG02	Melting System consisting of Panels A, B, C, and D, with 12 (5000 lb) pot furnaces and 1 (1000) lb pot furnace.	EU07, EU07A, EU08, EU08A
FG03	Pouring/casting and Cooling System	EUPOURCASTCOOL
FG05	Cleaning and Finishing System	EU09, EU10, EU11, EU12, EU13, EU14, EU15
FG06	Sand Reclamation System	EU16, EU17
FG07	Wax Injection & Molding	EU19, EU20, EU22, EU23
FG08	Melting & Pouring Equipment	EU24, EU25
FG09	Cleaning & Finishing Equipment	EU27, EU28, EU29, EU30, EU31, EU32, EU35, EU36, EU37
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA
FGMACTZZZZZ	The affected source existing iron and steel foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing large foundry as defined by MACT ZZZZZ.	FGFACILITY as applicable

Note: The equipment listed as FG07, FG08, and FG09 is located at Eagle Precision Cast Parts, 1512 Evanston Avenue, Muskegon.

The following conditions apply to:
FG02

DESCRIPTION: Melting System consisting of Panels A, B, C, and D, with 12 (5000 lb) pot furnaces and 1 (1000) lb pot furnace.

Emission Units: EU07, EU07A, EU08, EU08A

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.8 lb per ton of metal charged	Average of three furnace batch cycles	Each furnace in FG02	SC V.1, VI.1	R 336.1205, 40 CFR 52.21(c) and (d)
2. PM10	0.6 lb per ton of metal charged	Average of three furnace batch cycles	Each furnace in FG02	SC V.1, VI.1	R 336.1205, 40 CFR 52.21(c) and (d)
3. PM2.5	0.6 lb per ton of metal charged	Average of three furnace batch cycles	Each furnace in FG02	SC V.1, VI.1	R 336.1205, 40 CFR 52.21(c) and (d)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

- The permittee shall perform a one-time test to verify PM and PM10 emission rates from a representative emission unit in FG02 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed no later than the next round of testing after this permit issuance that is required under FGZZZZ per 40 CFR 63.10898. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	Testing per SC V.1 under FGZZZZ and 40 CFR 63.10898
PM10	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records of all performance tests required by SC V.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21(c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to:
FG05

DESCRIPTION: Cleaning and Finishing System

Emission Units: EU09, EU10, EU11, EU12, EU13, EU14, and EU15

POLLUTION CONTROL EQUIPMENT: EU09, EU10 controlled by dust collectors; EU12 and EU13 (snag and belt grinders) controlled by drop out boxes

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.01 lb/1,000 lb exhaust gas, dry gas basis	Test Method	FG05	GC 13	R 336.1331

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. Applicant shall not operate the FG05, unless the associated dust collector is installed and operating properly.
(R 336.1331, R 336.1910)

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The pressure drop across the dust collector shall be monitored according to its manufacturer's specifications.
(R 336.1331, R 336.1910)

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV01	20 X 14	12	R 336.1225, R 336.1331

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FG06

DESCRIPTION: Sand Reclamation System

Emission Units: EU16 and EU17

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.01 lb/1,000 lb exhaust gas, dry gas basis	Test Protocol	FG06	GC 13	R 336.1331

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. Applicant shall not operate the FG06, unless the associated dust collector is installed and operating properly.
(R 336.1331, R 336.1910)

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The pressure drop across the dust collector shall be monitored according to its manufacturer's specifications.
(R 336.1331, R 336.1910)

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV02	26 X 40	6.75	R 336.1225 R 336.1331

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FG09

DESCRIPTION: Cleaning & Finishing Equipment

Emission Units: EU27, EU28, EU29, EU30, EU31, EU32, EU33, EU35, EU36, and EU37

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.01 lb/1,000 lb exhaust gas, dry gas basis	Test Protocol	FG09	GC 13	R 336.1331

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. Applicant shall not operate the FG09, unless the associated dust collector is installed and operating properly.
(R 336.1331, R 336.1910)

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The pressure drop across the dust collector shall be monitored according to its manufacturer's specifications.
(R 336.1331, R 336.1910)

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV03	12	15.4	R 336.1225 R 336.1331

IX. OTHER REQUIREMENTS

NA

The following conditions apply Source-Wide to:
FGFACILITY

DESCRIPTION: All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	Less than 89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	GC 13 SC VI.3	R 336.1205(1)(a), R 336.1205(3)
2. PM10	Less than 89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	GC 13 SC VI.3	R 336.1205(1)(a), R 336.1205(3)
3. PM2.5	Less than 89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	GC 13 SC VI.3	R 336.1205(1)(a), R 336.1205(3)
4. Each Individual HAP	Less than 8.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	GC 13 SC VI.3	R 336.1205(1)(a), R 336.1205(3)
5. Aggregate HAPs	Less than 22.4 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	GC 13 SC VI.3	R 336.1205(1)(a), R 336.1205(3)

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Steel	32,000 tons produced per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
2. Lake sand	15,720 tons processed per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
3. Sand binder	121.6 tons processed per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
4. Shell sand binder	2000 tons processed per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
5. Shell sand	40,000 tons processed per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3))**
2. The permittee shall keep the following information on a monthly basis for FGFACILITY:
 - a) Total steel production, tons/year, based upon a 12-month rolling time period.
 - b) Lake sand, tons/year, based upon a 12-month rolling time period
 - c) Binder, tons/year, based upon a 12-month rolling time period
 - d) Shell sand resin usage, tons/year, based upon a 12-month rolling time period
 - e) Shell sand usage, tons/year, based upon a 12-month rolling time period

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. **(R 336.1205(3))**

3. The permittee shall keep the following information on a monthly basis for FGFACILITY:
 - a) PM emission calculations determining the monthly emission rate in tons per calendar month.
 - b) PM emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
 - c) PM10 emission calculations determining the monthly emission rate in tons per calendar month.
 - d) PM10 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
 - e) PM2.5 emission calculations determining the monthly emission rate in tons per calendar month.
 - f) PM2.5 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
 - g) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
 - h) 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. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months.

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 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

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

The following conditions apply to:
FGZZZZ

DESCRIPTION: The affected source is a new or existing iron and steel foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing large foundry as defined by 40 CFR Part 63 Subpart ZZZZZ.

Emission Units: FGFACILITY as applicable

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.8 lb per ton of metal charged	Average of three furnace batch cycles	Any metal melting furnace	SC V.1	40 CFR 63.10895(c)(1)
-OR-					
2. Total Metal HAP	0.06 lb per ton of metal charged	Average of three furnace batch cycles	Any metal melting furnace	SC V.1	40 CFR 63.10895(c)(1)

II. MATERIAL LIMITS

- 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)**

III. PROCESS/OPERATIONAL RESTRICTIONS

- The permittee shall implement and maintain an approved plan to address the pollution prevention management practices for metallic scrap and mercury switches by the applicable compliance date specified in 40 CFR 63.10881. The plan shall include the following:
 - Metallic scrap management program. **(40 CFR 63.10885(a))**
 - Mercury requirements. **(40 CFR 63.10885(b))**

The permittee shall revise the plan within 30 days after a change occurs. **(40 CFR 63.10885)**

IV. DESIGN/EQUIPMENT PARAMETERS

- The permittee shall not operate any metal melting furnace at the iron and steel foundry unless a capture and collection system are installed, maintained, and operated in accordance with the American Conference of Governmental Industrial Hygienists standards or equivalent unless the furnace is specifically uncontrolled as part of an emissions averaging group. **(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. Within 180 days after the applicable compliance date specified in 40 CFR 63.10881, the permittee shall conduct a performance test to demonstrate initial compliance with PM emission limits for each metal melting furnace. 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. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.
(40 CFR 63.10898)
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 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 shall 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 shall 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:
 - 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 §63.10897(d)(2); and
 - d) Identity and estimated quantity of the replacement parts that will be maintained in inventory.

The permittee may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in SC VI.2 to demonstrate compliance with the requirements for an O&M plan.

(40 CFR 63.10896(a) and (b))

2. Within 60 days after the applicable compliance date specified in 40 CFR 63.10881, the permittee shall conduct an initial inspection of each PM control device for each metal melting furnace. Following the initial inspections, the permittee shall perform periodic inspections and maintenance of each PM control device for each metal melting furnace. The permittee shall perform the initial and periodic inspections according to the requirements listed below and in 40 CFR 63.10897:
 - a) For the initial inspection of each baghouse, the permittee shall visually inspect the system ductwork and baghouse units for leaks and inspect the inside of each baghouse for structural integrity and fabric filter condition. **(40 CFR 63.10897(a)(1))**
 - b) For each subsequent inspection the permittee shall conduct monthly visual inspections of the system ductwork for leaks and conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 6 months. **(40 CFR 63.10897(a)(1)(i) and (ii))**
3. The permittee may install, operate, and maintain a bag leak detection system for each baghouse as an alternative to the baghouse inspection requirements in SC VI.3. Each bag leak detection system must meet the requirements of 40 CFR 63.10897(d)(1)(i) through (vii) **(40 CFR 63.10897(d)(1))**

4. The permittee shall prepare a site-specific monitoring plan for each bag leak detection system to be incorporated in the facility O&M plan. The permittee shall operate and maintain each bag leak detection system according to the plan at all times. The plan shall include all information required per 40 CFR 63.10897 (d)(2)(i) through (vi). **(40 CFR 63.10897(d)(2))**
5. In the event that a bag leak detection system alarm is triggered, the permittee shall initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm. The permittee shall record the date and time of each valid alarm, the corrective action was initiated, the correction action taken, and the date on which corrective action was completed. **(40 CFR 63.10897 (d)(3))**
6. The permittee shall perform monthly inspections of the equipment that is important to the performance of the total capture system. This inspection must include observations of the physical appearance of the equipment. The permittee shall repair any defect or deficiency in the capture system as soon as practicable, but no later than 90 days. The permittee shall record the date and results of each inspection and the date of repair of any defect or deficiency. **(40 CFR 63.10897(e))**
7. In the event of an exceedance of an established emissions limitation (including an operating limit), the permittee shall 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 shall 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))**
8. The permittee shall keep records on a monthly basis as required by 40 CFR 63.10899(b)(1) through (13) as applicable. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(40 CFR 63.10899(b))**
9. The permittee shall comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 3 in 40 CFR Part 63 Subpart ZZZZZ. **(40 CFR 63.10900)**
10. The notification of compliance status required by §63.9(h) shall include each applicable certification of compliance, signed by a responsible official, according to Table 4 in 40 CFR Part 63 Subpart ZZZZZ. **(§63.10900(b))**

VII. REPORTING

1. The permittee shall submit semiannual compliance reports to the Administrator according to the requirements in §63.10(e). The reports must include, at a minimum, the following information as applicable: **(40 CFR 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 §63.10885 and 63.10886 and the operation and maintenance requirements §63.10896 and the corrective action taken.
2. If applicable, the permittee shall 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 the facility has conducted periodic inspections or taken other means of corroboration as

required under §63.10885(b)(1)(ii)(C). The permittee shall identify which option in §63.10885(b) applies to each scrap provider, contract, or shipment. **(63.10899(b)(2)(i))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

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