MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

REVISED February 5, 2013
May 17, 2012

PERMIT TO INSTALL
278-98D

ISSUED TO
Betz Industries, Inc.

LOCATED AT
2121 Bristol Avenue
Grand Rapids, Michigan

IN THE COUNTY OF
Kent

STATE REGISTRATION NUMBER
B1716

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: **February 22, 2012**	
DATE PERMIT TO INSTALL APPROVED: **May 17, 2012**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM10	PM less than 10 microns diameter
MSDS	Material Safety Data Sheet	PM2.5	PM less than 2.5 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonably Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO_2	Sulfur Dioxide
SC	Special Condition	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
TEQ	Toxicity Equivalence Quotient	yr	Year
VE	Visible Emissions		

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (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, 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 AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. **(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)	Flexible Group ID
EU-14x16 SHAKE1	Shake out equipment No.1 controlled by the 50,000 cfm baghouse A	FGFOUNDRY
EU-14x16 SHAKE2	Shake out equipment No. 2 controlled by the 50,000 cfm baghouse B	
EU-EQUIP-A	Sand handling equipment A controlled by the 50,000 cfm baghouse C	
EU-EQUIP-B	Sand handling equipment B controlled by the 50,000 cfm baghouse D	
EU-MISC-E	Mixing and conveying equipment E controlled by the 18,000 cfm baghouse E	
EU-MISC-WEST	Shakeout tables, Didion drum and associated equipment controlled by the 30,000 cfm baghouse West	
EU-MISC-EAST	Cooling and conveying equipment controlled by the 30,000 cfm baghouse East	
EU-INDUCTION	Three induction furnaces, each furnace is controlled by a separate baghouse with each baghouse exhausting to a common stack with a volumetric flow rate of 80,000 cfm.	
EU-WHL-SHOTBLAST	Two Wheelabrator shot blasters controlled by an 18,000 cfm Waltz Holtz baghouse	
EU-PNB-SHOTBLAST	Two Pangborne shot blasters controlled by an 18,000 cfm Pangborne baghouse	
EU-MIXER2	Mixer No.2 controlled by a 2,000 cfm Dust Kop collector	
EU-POLYMILL	Milling process controlled by a 3,600 cfm Hoffman collector	
EU-CHIPPING	Chipping and cleaning process with no control	FGFACILITY
EU-POURING	Pouring process with no control	
EU-CASTING COOL	Cooling process with no control	
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: EU-INDUCTION

DESCRIPTION: Three electric induction furnaces with a holding capacity of 20 tons each.

Flexible Group ID: FGFOUNDRY, FGFACILITY

POLLUTION CONTROL EQUIPMENT: Three fabric filter collectors discharging to a common stack with an exhaust flow rate of 80,000 CFM.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.8 lbs per ton of metal charged	Protocol	EU-INDUCTION	SC V.1	40 CFR 63.10895 (c) (1)
2. PM10	0.00397 gr/dscf	Protocol	EU-INDUCTION	GC 13	R 336.1205 (3), R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
3. PM10	2.7 lb/hr	Protocol	EU-INDUCTION	GC 13	R 336.1205 (3), R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
4. PM2.5	0.00397 gr/dscf	Protocol	EU-INDUCTION	GC 13	R 336.1205 (3), R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
5. PM2.5	2.7 lbs/hr	Protocol	EU-INDUCTION	GC 13	R 336.1205 (3), R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
6. Lead	0.075 lb/hr	Protocol	EU-INDUCTION	GC 13	R 336.1225
7. Manganese	0.017 lb/hr	Protocol	EU-INDUCTION	GC 13	R 336.1225
8. Visible Emissions	10% Opacity	Six-minute average	EU-INDUCTION	SC V.1, V.	R 336.1331, R 336.1205

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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 EU-INDUCTION. 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).

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 continuous parameter monitoring system (CPMS) in accordance with manufacturer's specifications. **(§63.10896 of 40 CFR Part 63, Subpart ZZZZZ)**

2. The permittee may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in paragraph III 1. (a) through (e) to demonstrate compliance with the requirements for an O&M plan. **(§63.10896 of 40 CFR Part 63, Subpart ZZZZZ)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-INDUCTION unless the capture and collection control system equipped with baghouse Furnace is installed, maintained, and operated in accordance with the American Conference of Governmental Industrial Hygienists standards or equivalent. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 63.10895 (b))**

2. The permittee shall conduct monthly visible inspections of the PM control system for EU-INDUCTION and record the results to ensure that the system is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

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

1. Within 180 days after startup of EU-INDUCTION, the permittee shall conduct a performance test to demonstrate initial compliance with PM and visible emission limits for EU-INDUCTION and report the results in the notification of compliance status in accordance with applicable federal requirements listed in Table 1 to Subpart ZZZZZ of Part 63 (Appendix A). **(R 336.1205, §63.10898 of 40 CFR Part 63, Subpart ZZZZZ)**

2. The permittee shall conduct subsequent opacity tests in accordance with the requirements listed in Table 1 to Subpart ZZZZZ of Part 63 (Appendix A) to demonstrate compliance with the visible emissions limit specified in SC I.5. The testing frequency shall be no less than every 6 months and each time a process or equipment change occurs which would likely increase fugitive emissions. **(R 336.1205, §63.10898 of 40 CFR Part 63, Subpart ZZZZZ)**

VI. MONITORING/RECORDKEEPING

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

1. Within 60 days after the applicable compliance date of January 2, 2011, as specified in 40 CFR 63.10881, the permittee shall conduct an initial inspection and subsequent visual inspections of the PM control system for EU-INDUCTION and record the results in accordance with applicable federal requirements listed in Appendix B. **(§63.10897 of 40 CFR Part 63, Subpart ZZZZZ)**

2. In the event of an exceedance of the PM or visible emissions 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. **(§63.10897 of 40 CFR Part 63, Subpart ZZZZZ)**

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. SV-INDUCTION	80	80	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**

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
FGFOUNDRY	Foundry operations with baghouse control	EU-14x16 SHAKE1, EU-14x16 SHAKE2, EU-EQUIP-A, EU-EQUIP-B, EU-MISC-E, EU-MISC-WEST, EU-MISC-EAST, EU-INDUCTION, EU-WHL-SHOTBLAST, EU-PNB-SHOTBLAST, EU-MIXER1, EU-MIXER2, and EU-POLYMILL.
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	EU-CHIPPING, EU-POURING, EU-CASTING COOL

The following conditions apply to: FGFOUNDRY

DESCRIPTION: Various foundry processes with baghouse control.

Emission Units: EU-14x16 SHAKE1, EU-14x16 SHAKE2, EU-EQUIP-A, EU-EQUIP-B, EU-MISC-E, EU-MISC-WEST, EU-MISC-EAST, EU-INDUCTION, EU-WHL-SHOTBLAST, EU-PNB-SHOTBLAST, EU-MIXER2, and EU-POLYMILL.

POLLUTION CONTROL EQUIPMENT: Control equipment is described in the Emission Unit Summary Table.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.01 lb/1000 lbs gas, on a dry basis	Protocol	FGFOUNDRY	GC 13	**R 336.1205 (3), R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
2. PM10	0.005 gr/dscf	Protocol	FGFOUNDRY	GC 13	**R 336.1205 (3), R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
3. Visible Emissions	10% Opacity	Six-minute average	FGFOUNDRY	SC V.1, V.2	**R 336.1331, R 336.1205**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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 FGFOUNDRY. 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).
   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 continuous parameter monitoring system (CPMS) in accordance with manufacturer's specifications. **(§63.10896 of 40 CFR Part 63, Subpart ZZZZZ)**

2. The permittee may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in paragraph III 1. (a) through (e) to demonstrate compliance with the requirements for an O&M plan. **(§63.10896 of 40 CFR Part 63, Subpart ZZZZZ)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any emission unit of FGFOUNDRY unless the associated baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 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 180 days after the applicable compliance date of January 2, 2011, as specified in 40 CFR 63.10881, the permittee shall conduct a performance test to demonstrate initial compliance with the visible emission limit for each control device of FGFOUNDRY and report the results in the notification of compliance status in accordance with applicable federal requirements listed in Table 1 to Subpart ZZZZZ of Part 63 (Appendix A). **(R 336.1205, §63.10898 of 40 CFR Part 63, Subpart ZZZZZ)**

2. The permittee shall conduct subsequent opacity tests in accordance with the requirements listed in Table 1 to Subpart ZZZZZ of Part 63 (Appendix A) to demonstrate compliance with the visible emissions limit specified in SC I.3. The testing frequency shall be no less than every 6 months and each time a process or equipment change occurs which would likely increase fugitive emissions. **(R 336.1205, §63.10898 of 40 CFR Part 63, Subpart ZZZZZ)**

VI. MONITORING/RECORDKEEPING

NA

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. SV-SHAKE1	70	80	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
2. SV-SHAKE2	70	80	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
3. SV-EQUIP-A	70	80	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
4. SV-EQUIP-B	70	80	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
5. SV-MISC-E	38	80	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
6. SV-MISC-WEST	48	76	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
7. SV-MISC-EAST	48	76	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
8. SV-WHL-SHOTBLAST	48	55	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
9. SV-PNB-SHOTBLAST	48	55	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
10. SV-MIXER2	Exhaust inside the plant		**NA**
11. SV-POLYMILL*	10	14.5	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)**
***horizontal exhaust			

IX. OTHER REQUIREMENTS

NA

The following conditions apply Source-Wide to: FGFACILITY

I. Emission Limits

Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirements
1. PM	98.1 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFACILITY	VI. 2, VI.5, VI.6	**R336.1205(3)**
2. PM10	98.1 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFACILITY	VI. 2, VI.5, VI.6	**R336.1205(3)**
3. CO	99 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFACILITY	VI. 2, VI.5, VI.6	**R336.1205(3)**
4. VOC	45 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFACILITY	VI. 2, VI.5, VI.6	**R336.1205(3)**
5. Individual HAP	9 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFACILITY	VI. 2, VI.5, VI.6	**R336.1205(3)**
6. Aggregate HAPs	22.5 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFACILITY	VI. 2, VI.5, VI.6	**R336.1205(3)**

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Metal	65,000 tons melted /yr	12-rolling time period	FGFACILITY	VI. 2	**R336.1205(3)**
2. Sand	325,000 tons/yr	12-rolling time period	FGFACILITY	VI. 2	**R336.1205(3)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. On and after January 2, 2009, 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:

   a. Metallic scrap management program. (40 CFR 63.10885(a))

   b. Mercury requirements. (40 CFR 63.10885(b))

   The permittee shall revise the plan within 30 days after a change occurs. **(§63.10885 of 40 CFR Part 63, Subpart ZZZZZ)**

2. The permittee shall not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater 20 percent. **(R 336.1358**, **§63.10895(e) of 40 CFR Part 63, Subpart ZZZZZ)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

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 of January 2, 2011, as specified in 40 CFR 63.10881, the permittee shall conduct a performance test to demonstrate initial compliance with the fugitive emission limit for foundry operations at FGFACILITY and report the results in the notification of compliance status in accordance with applicable federal requirements listed in Table 1 to Subpart ZZZZZ of Part 63 (Appendix A). **(R 336.1205, §63.10898 of 40 CFR Part 63, Subpart ZZZZZ)**

2. The permittee shall conduct subsequent opacity tests in accordance with the requirements listed in Table 1 to Subpart ZZZZZ of Part 63 (Appendix A) to demonstrate compliance with the visible emissions limit specified in SC III.2. The testing frequency shall be no less than every 6 months and each time a process or equipment change occurs which would likely increase fugitive emissions. **(R 336.1205, §63.10898 of 40 CFR Part 63, Subpart ZZZZZ)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall comply with the requirements of the General Provisions of 40 CFR Part 63, Subpart A according to Table 3 in Appendix C. **(§63.10900(a) of 40 CFR Part 63, Subpart ZZZZZ)**

2. The permittee shall keep, in a satisfactory manner, records of metal melted and sand used, in tons per month for FGFACILITY, as required by SC II.1 and SC II.2. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1205, R 336.1225)**

3. The permittee shall 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 §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. **(§ 63.10899 of 40 CFR Part 63 Subpart ZZZZZ)**

4. The permittee shall 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. **(§ 63.10899 of 40 CFR Part 63 Subpart ZZZZZ)**

5. The permittee shall complete all required calculations 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 recordkeeping, reporting or notification special condition. **(R336.1205(3))**

6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period PM, PM10, CO, VOC, individual HAP, and aggregate HAP emission calculation records for FG-FACILITY, as required by SC I.1, SC I.2, SC I.3, SC I.4, SC I.5, and SC I.6. The permittee shall keep all records on file at for a period of at least five years and make them available to the Department upon request. **(R336.1205(3))**

7. The permittee shall maintain all records in accordance with applicable federal requirements for recordkeeping and reporting as listed in Appendix E. **(§63.10899 of 40 CFR Part 63, Subpart ZZZZZ)**

VII. REPORTING

1. The permittee shall submit an initial notification of applicability according to §63.9(b)(2) of 40 CFR Part 63, Subpart A. **(§63.10890(b) of 40 CFR Part 63, Subpart ZZZZZ)**

2. Within 30 days after the applicable compliance date specified in 40 CFR 63.10881, the permittee shall submit a notification of compliance status according to §63.9(h)(1)(i) of 40 CFR Part 63, Subpart A. The notification shall include all applicable compliance certifications as specified in 40 CFR 63.10890(c)(1) & (2). **(§63.10890(c) of 40 CFR Part 63, Subpart ZZZZZ)**

3. The notification of compliance status required by §63.9(h) shall include each applicable certification of compliance, signed by a responsible official, in Table 4 in Appendix D. **(§63.10900(b) of 40 CFR Part 63, Subpart ZZZZZ)**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

APPENDIX A

Performance Test Requirements
(§ 63.10898 of 40 CFR Part 63 Subpart ZZZZZ**)**

(a) The permittee must conduct a performance test to demonstrate initial compliance with the applicable emissions limits for each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit in § 63.10895(c) and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions in § 63.10895(e). The permittee must conduct the test within 180 days of the compliance date and report the results in the notification of compliance status.

(1) If the permittee owns or operates an existing iron and steel foundry, the permittee may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or the permittee can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

(2) If the permittee owns or operates an existing iron and steel foundry and the permittee choose to submit the results of a prior performance test according to paragraph (a)(1) of this section, must submit a written notification to the Administrator of the intent to use the previous test data no later than 60 days after the compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(3) If the permittee has an electric induction furnace equipped with an emissions control device at an existing foundry, the permittee may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) provided the furnaces are similar with respect to the type of emission control device that is used, the composition of the scrap charged, furnace size, and furnace melting temperature.

(4) If the permittee has an uncontrolled electric induction furnace at an existing foundry, the permittee may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) provided the test results are prior to any control device and the electric induction furnaces are similar with respect to the composition of the scrap charged, furnace size, and furnace melting temperature.

(5) For electric induction furnaces that do not have emission capture systems, the permittee may install a temporary enclosure for the purpose of representative sampling of emissions. A permanent enclosure and capture system is not required for the purpose of the performance test.

(b) The permittee must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emissions limits in § 63.10895(c) for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years and each time the permittee elect to change an operating limit or make a process change likely to increase HAP emissions.

(c) The permittee must conduct each performance test according to the requirements in § 63.7(e)(1), Table 1 to this subpart, and paragraphs (d) through (g) of this section.

(d) To determine compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) for a metal melting furnace in a lb/ton of metal charged format, compute the process-weighted mass emissions (Ep) for each test run using Equation 1 of this section:

$$E_P = \frac{C \times Q \times T}{P \times K} \qquad (Eq\ 1)$$

Where:

E_p = Process-weighted mass emissions rate of PM or total metal HAP, pounds of PM or total metal HAP per ton (lb/ton) of metal charged;

C = Concentration of PM or total metal HAP measured during performance test run, grains per dry standard cubic foot (gr/dscf);

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per hour (dscf/hr);

T = Total time during a test run that a sample is withdrawn from the stack during melt production cycle, hr;

P = Total amount of metal charged during the test run, tons; and

K = Conversion factor, 7,000 grains per pound.

(e) To determine compliance with the applicable emissions limit in § 63.10895(c) for a group of all metal melting furnaces using emissions averaging,

(1) Determine and record the monthly average charge rate for each metal melting furnace at the iron and steel foundry for the previous calendar month; and

(2) Compute the mass-weighted PM or total metal HAP using Equation 2 of this section.

$$E_c = \frac{\sum_{i=1}^{n} \left(E_{pi} \times T_{ti}\right)}{\sum_{i=1}^{n} T_{ti}} \qquad (Eq.\ 2)$$

Where:

E_C = The mass-weighted PM or total metal HAP emissions for the group of all metal melting furnaces at the foundry, pounds of PM or total metal HAP per ton of metal charged;

E_{pi} = Process-weighted mass emissions of PM or total metal HAP for individual emission unit i as determined from the performance test and calculated using Equation 1 of this section, pounds of PM or total metal HAP per ton of metal charged;

T_{ti} = Total tons of metal charged for individual emission unit i for the calendar month prior to the performance test, tons; and

n = The total number of metal melting furnaces at the iron and steel foundry.

(3) For an uncontrolled electric induction furnace that is not equipped with a capture system and has not been previously tested for PM or total metal HAP, the permittee may assume an emissions factor of 2 pounds per ton of PM or 0.13 pounds of total metal HAP per ton of metal melted in Equation 2 of this section instead of a measured test value. If the uncontrolled electric induction furnace is equipped with a capture system, the permittee must use a measured test value.

(f) To determine compliance with the applicable PM or total metal HAP emissions limit for a metal melting furnace in § 63.10895(c) when emissions from one or more regulated furnaces are combined with other non-regulated emissions sources, the permittee may demonstrate compliance using the procedures in paragraphs (f)(1) through (3) of this section.

(1) Determine the PM or total metal HAP process-weighted mass emissions for each of the regulated streams prior to the combination with other exhaust streams or control device.

(2) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 3 of this section.

$$\%\ \text{reduction} = \frac{E_i - E_o}{E_i} \times 100\% \qquad (\text{Eq. 3})$$

Where:

E_i= Mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr;

E_o= Mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(3) Meet the applicable emissions limit based on the calculated PM or total metal HAP process-weighted mass emissions for the regulated emissions source using Equation 4 of this section:

$$E_{p1\_\_\_} E_{p1} \times \left(1 - \frac{\%\ \text{reduction}}{100}\right) \qquad (\text{Eq. 4})$$

Where:

$E_{p1released}$= Calculated process-weighted mass emissions of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, pounds of PM or total metal HAP per ton of metal charged; and

E_{p1i}= Process-weighted mass emissions of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, pounds of PM or total metal HAP per ton of metal charged.

(g) To determine compliance with an emissions limit for situations when multiple sources are controlled by a single control device, but only one source operates at a time or other situations that are not expressly considered in paragraphs (d) through (f) of this section, the permittee must submit a site-specific test plan to the Administrator for approval according to the requirements in §63.7(c)(2) and (3).

(h) The permittee must conduct each opacity test for fugitive emissions according to the requirements in §63.6(h)(5) and Table 1 to this subpart.

(i) The permittee must conduct subsequent performance tests to demonstrate compliance with the opacity limit in §63.10895(e) no less frequently than every 6 months and each time the permittee make a process change likely to increase fugitive emissions.

(j) In the performance test report, the permittee must certify that the capture system operated normally during the performance test.

(k) The permittee must establish operating limits for a new affected source during the initial performance test according to the requirements in Table 2 of this subpart.

(l) The permittee may change the operating limits for a wet scrubber, electrostatic precipitator, or baghouse if the permittee meet the requirements in paragraphs (l)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of the plan to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in §63.10895(c).

(3) Establish revised operating limits according to the applicable procedures in Table 2 to this subpart.

Table 1 to Subpart ZZZZZ of Part 63.—Performance Test Requirements for New and Existing Affected Sources Classified as Large Foundries

As required in §63.10898(c) and (h), the permittee must conduct performance tests according to the test methods and procedures in the following table:

For. . .	The permittee must. . .	According to the following requirements. . .
1. Each metal melting furnace subject to a PM or total metal HAP limit in §63.10895(c)	a. Select sampling port locations and the number of traverse points in each stack or duct using EPA Method 1 or 1A (40 CFR part 60, appendix A) b. Determine volumetric flow rate of the stack gas using Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR part 60, appendix A) c. Determine dry molecular weight of the stack gas using EPA Method 3, 3A, or 3B (40 CFR part 60, appendix A).[1] d. Measure moisture content of the stack gas using EPA Method 4 (40 CFR part 60, A) e. Determine PM concentration using EPA Method 5, 5B, 5D, 5F, or 5I, as applicable or total metal HAP concentration using EPA Method 29 (40 CFR part 60, appendix A)	Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere. i. Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch. ii. For Method 29, only the measured concentration of the listed metal HAP analytes that are present at concentrations exceeding one-half the quantification limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantification limit of the analytical method, the concentration of those analytes is assumed to be zero for the purposes of calculating the total metal HAP. iii. A minimum of three valid test runs are needed to comprise a PM or total metal HAP performance test. iv. For cupola metal melting furnaces, sample PM or total metal HAP only during times when the cupola is on blast. v. For electric arc and electric induction metal melting furnaces, sample PM or total metal HAP only during normal melt production conditions, which may include, but are not limited to the following operations: Charging, melting, alloying, refining, slagging, and tapping. vi. Determine and record the total combined weight of tons of metal charged during the duration of each test run. The permittee must compute the process-weighted mass emissions of PM according to Equation 1 of §63.10898(d) for an individual furnace or Equation 2 of §63.10898(e) for the group of all metal melting furnaces at the foundry.

2. Fugitive emissions from buildings or structures housing any iron and steel foundry emissions sources subject to opacity limit in §63.10895(e)	a. Using a certified observer, conduct each opacity test according to EPA Method 9 (40 CFR part 60, appendix A–4) and 40 CFR 63.6(h)(5)	i. The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation. ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the opacity test such that the opacity observations are recorded during the PM or total metal HAP performance tests.
	b. As alternative to Method 9 performance test, conduct visible emissions test by Method 22 (40 CFR part 60, appendix A–7). The test is successful if no visible emissions are observed for 90 percent of the readings over 1 hour. If VE is observed greater than 10 percent of the time over 1 hour, then the facility must conduct another performance test as soon as possible, but no later than 15 calendar days after the Method 22 test, using Method 9 (40 CFR part 60, appendix A–4)	i. The observer may identify a limited number of openings or vents that appear to have the highest visible emissions and perform observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single observation for the entire building or structure may be performed, if the fugitive release points afford such an observation. ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the visible emissions test such that the observations are recorded during the PM or total metal HAP performance tests.

[1]The permittee may also use as an alternative to EPA Method 3B (40 CFR part 60, appendix A), the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses” (incorporated by reference—see §63.14).

Table 2 to Subpart ZZZZZ of Part 63.—Procedures for Establishing Operating Limits for New Affected Sources Classified as Large Foundries

As required in §63.10898(k), the permittee must establish operating limits using the procedures in the following table:

For . . .	The permittee must . . .
1. Each wet scrubber subject to the operating limits in §63.10895(d)(1) for pressure drop and scrubber water flow rate.	Using the CPMS required in §63.10897(b), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the average pressure drop and average scrubber water flow rate for all the valid sampling runs in which the applicable emissions limit is met.
2. Each electrostatic precipitator subject to operating limits in §63.10895(d)(2) for voltage and secondary current (or total power input).	Using the CPMS required in §63.10897(c), measure and record voltage and secondary current (or total power input) in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the minimum hourly average voltage and secondary current (or total power input) from all the readings for each valid sampling run in which the applicable emissions limit is met.

APPENDIX B

Monitoring Requirements
(§ 63.10897 of 40 CFR Part 63 Subpart ZZZZZ**)**

(a) The permittee must conduct an initial inspection of each PM control device for a metal melting furnace at an existing affected source. The permittee must conduct each initial inspection no later than 60 days after the applicable compliance date for each installed control device which has been operated within 60 days of the compliance date. For an installed control device which has not operated within 60 days of the compliance date, the permittee must conduct an initial inspection prior to startup of the control device. Following the initial inspections, the permittee must perform periodic inspections and maintenance of each PM control device for a metal melting furnace at an existing affected source. The permittee must perform the initial and periodic inspections according to the requirements in paragraphs (a)(1) through (4) of this section. The permittee must record the results of each initial and periodic inspection and any maintenance action in the logbook required in §63.10899(b)(13).

(1) For the initial inspection of each baghouse, the permittee must visually inspect the system ductwork and baghouse units for leaks. The permittee must also inspect the inside of each baghouse for structural integrity and fabric filter condition. Following the initial inspections, the permittee must inspect and maintain each baghouse according to the requirements in paragraphs (a)(1)(i) and (ii) of this section.

(i) The permittee must conduct monthly visual inspections of the system ductwork for leaks.

(ii) The permittee must conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 6 months.

(2) For the initial inspection of each dry electrostatic precipitator, the permittee must verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold. The permittee must also visually inspect the system ductwork and electrostatic housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, hopper, and air diffuser plates. Following the initial inspection, The permittee must inspect and maintain each dry electrostatic precipitator according to the requirements in paragraphs (a)(2)(i) through (iii) of this section.

(i) The permittee must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold.

(ii) The permittee must conduct monthly visual inspections of the system ductwork, housing unit, and hopper for leaks.

(iii) The permittee must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

(3) For the initial inspection of each wet electrostatic precipitator, the permittee must verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present. The permittee must also visually inspect the system ductwork and electrostatic precipitator housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates. Following the initial inspection, the permittee must inspect and maintain each wet electrostatic precipitator according to the requirements in paragraphs (a)(3)(i) through (iii) of this section.

(i) The permittee must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present.

(ii) The permittee must conduct monthly visual inspections of the system ductwork, electrostatic precipitator housing unit, and hopper for leaks.

(iii) The permittee must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates every 24 months.

(4) For the initial inspection of each wet scrubber, the permittee must verify the presence of water flow to the scrubber. The permittee must also visually inspect the system ductwork and scrubber unit for leaks and inspect the interior of the scrubber for structural integrity and the condition of the demister and spray nozzle. Following the initial inspection, the permittee must inspect and maintain each wet scrubber according to the requirements in paragraphs (a)(4)(i) through (iii) of this section.

(i) The permittee must conduct a daily inspection to verify the presence of water flow to the scrubber.

(ii) The permittee must conduct monthly visual inspections of the system ductwork and scrubber unit for leaks.

(iii) The permittee must conduct inspections of the interior of the scrubber to determine the structural integrity and condition of the demister and spray nozzle every 12 months.

(b) For each wet scrubber applied to emissions from a metal melting furnace at a new affected source, the permittee must use a continuous parameter monitoring system (CPMS) to measure and record the 3-hour average pressure drop and scrubber water flow rate.

(c) For each electrostatic precipitator applied to emissions from a metal melting furnace at a new affected source, the permittee must measure and record the hourly average voltage and secondary current (or total power input) using a CPMS.

(d) If the permittee owns or operates an existing affected source, the permittee may install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse as an alternative to the baghouse inspection requirements in paragraph (a)(1) of this section. If the permittee owns or operates a new affected source, the permittee must install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse. The permittee must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the requirements in paragraphs (d)(1)(i) through (vii) of this section.

(i) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means.

(iii) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points. If the system is equipped with an alarm delay time feature, the permittee also must adjust the alarm delay time.

(v) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time. Except, once per quarter, the permittee may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the monitoring plan required by paragraph (d)(2) of this section.

(vi) For negative pressure baghouses, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the baghouse and upstream of any wet scrubber.

(vii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The permittee must prepare a site-specific monitoring plan for each bag leak detection system to be incorporated in the O&M plan. The permittee must operate and maintain each bag leak detection system according to the plan at all times. Each plan must address all of the items identified in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system.

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established.

(iii) Operation of the bag leak detection system including quality assurance procedures.

(iv) Maintenance of the bag leak detection system including a routine maintenance schedule and spare parts inventory list.

(v) How the bag leak detection system output will be recorded and stored.

(vi) Procedures for determining what corrective actions are necessary in the event of a bag leak detection alarm as required in paragraph (d)(3) of this section.

(3) In the event that a bag leak detection system alarm is triggered, the permittee must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm. The permittee must record the date and time of each valid alarm, the time the permittee initiated corrective action, the correction action taken, and the date on which corrective action was completed. Corrective actions may include, but are not limited to:

(i) Inspecting the bag house for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse department.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

(e) 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. The permittee must record the date and results of each inspection and the date of repair of any defect or deficiency.

(f) The permittee must install, operate, and maintain each CPMS or other measurement device according to the O&M plan. The permittee must record all information needed to document conformance with these requirements.

(g) 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.

(h) If the permittee chooses 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 melted from the group of all metal melting furnaces at the 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).

APPENDIX C

Table 3 to Subpart ZZZZZ of Part 63.—Applicability of General Provisions to New and Existing Affected Sources Classified as Large Foundries

As required in §63.10900(a), the permittee must meet each requirement in the following table that applies to you:

Citation	Subject	Applies to large foundry?	Explanation
63.1	Applicability	Yes	
63.2	Definitions	Yes	
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities	Yes	
63.5	Construction/reconstruction	Yes	
63.6(a)–(g)	Compliance with standards and maintenance requirements	Yes	
63.6(h)	Opacity and visible emissions standards	Yes	
63.6(i)(i)–(j)	Compliance extension and Presidential compliance exemption	Yes	
63.7(a)(3), (b)–(h)	Performance testing requirements	Yes	
63.7(a)(1)–(a)(2)	Applicability and performance test dates	No	Subpart ZZZZZ specifies applicability and performance test dates.
63.8(a)(1)–(a)(3), (b), (c)(1)–(c)(3), (c)(6)–(c)(8), (d), (e), (f)(1)–(f)(6), (g)(1)–(g)(4)	Monitoring requirements	Yes	
63.8(a)(4)	Additional monitoring requirements for control devices in §63.11	No	
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No	
63.8(c)(5)	Continuous opacity monitoring system (COMS) minimum procedures	No	
63.8(g)(5)	Data reduction	No	
63.9	Notification requirements	Yes	
63.10(a), (b)(1)–(b)(2)(xii) –(b)(2)(xiv), (b)(3), (d)(1)–(2), (e)(1)–(2), (f)	Recordkeeping and reporting requirements	Yes	
63.10(c)(1)–(6), (c)(9)–(15)	Additional records for continuous monitoring systems	No	
63.10(c)(7)–(8)	Records of excess emissions and parameter monitoring exceedances for CMS	Yes	
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes	

Citation	Subject	Applies to large foundry?	Explanation
63.10(e)(3)	Excess emissions reports	Yes	
63.10(e)(4)	Reporting COMS data	No	
63.11	Control device requirements	No	
63.12	State authority and delegations	Yes	
63.13–63.16	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality. Performance track provisions	Yes	

APPENDIX D

Table 4 to Subpart ZZZZZ of Part 63.—Compliance Certifications for New and Existing Affected Sources Classified as Large Iron and Steel Foundries

As required by §63.10900(b), the notification of compliance status must include certifications of compliance according to the following table:

For. . .	The notification of compliance status required by §63.9(h) must include this certification of compliance, signed by a responsible official:
Each new or existing affected source classified as a large foundry and subject to scrap management requirements in §63.10885(a)(1) and/or (2)	"This facility has prepared, and will operate by, written material specifications for metallic scrap according to §63.10885(a)(1)" and/or "This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to §63.10885(a)(2)."
Each new or existing affected source classified as a large foundry and subject to mercury switch removal requirements in §63.10885(b)	"This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to §63.10885(b)(1)" and/or "This facility participates in and purchases motor vehicles scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator according to §63.10885(b)(2) and have prepared a plan for participation in the EPA approved program according to §63.10885(b)(2)(iv)" and/or "The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with §63.10885(b)(3) which are not reasonably expected to contain mercury switches" and/or "This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10885(b)(4)."
Each new or existing affected source classified as a large foundry and subject to §63.10886	"This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to §63.10886."
Each new or existing affected source classified as a large foundry and subject to §63.10895(b)	"This facility operates a capture and collection system for each emissions source subject to this subpart according to §63.10895(b)."
Each existing affected source classified as a large foundry and subject to §63.10895(c)(1)	"This facility complies with the PM or total metal HAP emissions limit in §63.10895(c) for each metal melting furnace or group of all metal melting furnaces based on a previous performance test in accordance with §63.10898(a)(1)."
Each new or existing affected source classified as a large foundry and subject to §63.10896(a)	"This facility has prepared and will operate by an operation and maintenance plan according to §63.10896(a)."
Each new or existing (if applicable) affected source classified as a large foundry and subject to §63.10897(d)	"This facility has prepared and will operate by a site-specific monitoring plan for each bag leak detection system and submitted the plan to the Administrator for approval according to §63.10897(d)(2)."

APPENDIX E

Recordkeeping and Reporting Requirements
(§ 63.10899 of 40 CFR Part 63 Subpart ZZZZZ)

(a) As required by §63.10(b)(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.

(b) In addition to the records required by 40 CFR 63.10, the permittee must keep records of the information specified in paragraphs (b)(1) through (13) of this section.

(1) The permittee must keep records of the written materials specifications according to §63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in §63.10885(a)(1) and/or for the use of general scrap in §63.10885(a)(2) and for mercury in §63.10885(b)(1) through (3), as applicable. The permittee must keep records documenting compliance with §63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(2) If the permittee is subject to the requirements for a site-specific plan for mercury under §63.10885(b)(1), the permittee must:

(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 the permittee has conducted periodic inspections or taken other means of corroboration as required under §63.10885(b)(1)(ii)(C). The permittee must identify which option in §63.10885(b) applies to each scrap provider, contract, or shipment. The permittee may include this information in the semiannual compliance reports required under paragraph (c) of this section.

(3) If the permittee is subject to the option for approved mercury programs under §63.10885(b)(2), the permittee must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If the scrap provider is a broker, the permittee 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.

(4) 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 §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.

(5) 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.

(6) The permittee must keep records of monthly metal melt production for each calendar year.

(7) The permittee must keep a copy of the operation and maintenance plan as required by §63.10896(a) and records that demonstrate compliance with plan requirements.

(8) If the permittee use emissions averaging, the permittee must keep records of the monthly metal melting rate for each furnace at the iron and steel foundry, and records of the calculated pounds of PM or total metal HAP per ton of metal melted for the group of all metal melting furnaces required by §63.10897(h).

(9) If applicable, the permittee must keep records for bag leak detection systems as follows:

(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 the permittee initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(10) The permittee must keep records of capture system inspections and repairs as required by §63.10897(e).

(11) The permittee must keep records demonstrating conformance with the specifications for the operation of CPMS as required by §63.10897(f).

(12) The permittee must keep records of corrective action(s) for exceedances and excursions as required by §63.10897(g).

(13) The permittee must record the results of each inspection and maintenance required by §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. The permittee must keep records of the information specified in paragraphs (b)(13)(i) through (iii) of this section.

(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.

(c) The permittee must 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:

(1) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;

(2) 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

(3) 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.

(d) The permittee must submit written notification to the Administrator of the initial classification of the new or existing affected source as a large iron and steel facility as required in §63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in §63.10881(d) or (e), as applicable.