Emissions Minimization Plan

Regulation 12, Miscellaneous Standards of Performance, Rule 13 Foundry and Forging Operations

Pacific Steel Casting Company LLC

District Site #187, 703, 1603
1333 Second Street
Berkeley, CA 94710

Table of Contents

I, as the Responsible Manager of this facility, hereby certify that as of this date, this Emissions Minimization Plan contains all elements and information required of a complete EMP pursuant to District Regulation Section 12-13-403 and that the information contained in this EMP is accurate.

Certified by: _____ *Dated:* 1/11/15

Krishnan Venkatesan, Chief Operating Officer

Responsible Manager

Designation of Confidential Business Information

Describe the information you designate as "CONFIDENTIAL" that are trade secret or otherwise exempt under law from public disclosure. Specify what is "CONFIDENTIAL" and include specific section(s) and corresponding page number(s).

Name of Section / Page Number(s)	Description of Confidential Information
Organization Chart / Appendix A	This section is business confidential for security reasons and since their disclosure may give competitors and economic advantage. No bearing on air emissions.
Schedule of Operations / Pg 12	This section is business confidential for security reasons.
Mold and Core Making Operations / Page 14-18	Binders used at the facility are business confidential since their disclosure may give competitors and economic advantage
Description of Operations-Mold and Core Making Operations / Page 20	The Binders, Mix Ratio & MSDS information is propriatary
Appendix C All pages	Plant Layout is business confidential for security reasons and since their disclosure may give competitors and economic advantage

Company Description

Pacific Steel Casting Company LLC purchased Pacific Steel Casting Company. The tranfer of assests was completed on August 29, 2014

Pacific Steel Casting Company LLC (PSC LLC) has three (3) separate steel foundries, which are located within a two-block area in Berkeley, California. They are generally referred to as Plant 187, Plant 703 and Plant 1603. The facilities are located in the Berkeley manufacturing and industrial area. Other industrial facilities such as a forging manufacturer, pattern shop, machine shop, railroad lines, and brewery are also located near PSC LLC. Further, PSC LLC is located adjacent and close to a major East Bay freeway.

PSC LLC produces high quality steel casting using different sand molding processes. Thousands of custom-made parts are produced at PSC LLC that are used in everyday lives by individuals and businesses. PSC LLC cast steel parts can be found in bridges, wheelchair lifts, truck parts, agricultural equipment, valves for sanitary sewers, public water systems, the oil and gas industry, landfill compactors and, in the structural aspects of buildings.

PSC LLC employs over 400 employees. Most of them are union members of the Glass Molders and Plastics Union, Local 164. Many of PSC LLC employees are second or third generation foundry employees. More than 85% of PSC LLC employees live near PSC LLC commuting within 15 miles or less. Employees from PSC LLC participate in health and welfare and pension benefits.PSC LLC maintains an excellent safety and health record. PSC LLC regularly works with material manufacturers to develop better and lower emitting products.

PSC LLC purchases scrap metal from qualified vendors. The scrap is melted into metal that are alloys of steel. The molten steel is poured into sand molds. This is the basic sand mold method of producing castings. The metal inside these molds cools and hardens to form the castings. Once the castings have cooled and adopted their forms, they are sent to the shakeout station in which the sand is separated from the casting both internally and externally. Sand from the shakeout station is transferred to a reclamation unit where it is cleaned of material and processed for reuse. This sand reuse conserves tons of new sand that would otherwise be needed and eliminates tons of sand from landfill disposal. The sand reclamation unit at PSC LLC is, and always has been, state of the art equipment. The cooled castings are next sent to the finishing department before going to the shipping department.

In general, each Company plant produces steel castings using sand molding processes that are best suited for the design and size of the casting made at that plant. The binders are mixed with the sand and are used to harden the sand chemically with or without external heat.

Plant I87 began operations in the 1930's making medium sized castings using primarily the Green Sand molding process. The binder for green sand molds is a combination of clay, water, and cornstarch compacted to form the necessary molds.

Plant 703 began operations in 1975. This plant uses a Shell process for the molding system. This sand molding process uses a binder mixed with the sand and baked to form the necessary molds and cores for the castings.

Plant 1603 began operations in 1981. This plant primarily uses a phenolic urethane binder, which is a chemical binder mixed with the sand.

Company Organizational Chart and Schedule of Management Operators
12-13-403.1.3

A. *Company Organizational Chart-* Attach a copy of the organizational chart of the company, which describes the business structure and includes the name of the facility's Responsible Official.

B. *Schedule of Management Operators* - Provide the names and contact information of the Onsite Responsible Manager(s) and Onsite Alternate Contact(s) and their duty schedule.

A. Company Organizational Chart

In Appendix A - Confidential

B. Schedule of Management Operators

Onsite Responsible Manager(s)

Name: Confidential
Title: Environmental, Health & Safety Director
Phone: Confidential
Email: Confidential
Schedule/Shift: Confidential

Name: Confidential
Title: Chief Operating Officer
Phone: Confidential
Email: Confidential
Schedule/Shift: Confidential

Onsite Alternate Contact(s)

Name: Confidential
Title: Environmental Technician
Phone: Confidential
Email: Confidential
Schedule/Shift: Confidential

Name: Confidential
Title: Supervisor
Phone: Confidential
Email: Confidential
Schedule/Shift: Confidential

Name: Confidential
Title: Supervisor
Phone: Confidential
Email: Confidential
Schedule/Shift: Confidential

Contents of the EMP

12-13-403

The owner of operator of the foundry or forge subject to Section 12-13-401 shall prepare a complete and accurate EMP that details the management practices, measures, equipment and procedures that are employed or scheduled to be implemented to minimize fugitive emissions of particulate matter and odorous substances for the operations subject to the EMP.

A. *Operations Subject to EMP and Schedule of Operations*

B. *Description of Operations* - Facilities with operations under 12-13-402 must list and provide description of all process equipment, material usages, abatement and control equipment and monitoring parameters to reduce fugitive emissions of particulates and odors. Please provide information for all the following operations that apply.

C. *Management Practices to Reduce Fugitive Emissions*- Facilities with operations under 12-13-402 must list and provide descriptions of all preventative maintenance activities, pollution prevention and source reduction measures to reduce fugitive emissions of particulates and odors. Provide schedules of activities conducted.

D. *Description of Abatement and Control Equipment*- Facilities must provide a comprehensive list of all abatement and control equipment for operations subject to 12-13-402 and name the source(s) of operation in which it abates.

A. Operations Subject to EMP and Schedule of Operations

The EMP shall address all of the following operations that are conducted at a foundry or forge per 12-13-402.

Please check all facility operations that apply and provide the schedule of operation.

Operation	Schedule of Operations
☒ 402.1 Mold and Core Making Operations	Confidential
☒ 402.2 Metal Management	Confidential
☒ 402.3 Furnace Operations, including tapping and pouring	Confidential
☐ 402.4 Forging Operations	N/A
☒ 402.5 Casting and Cooling Operation	Confidential
☒ 402.6 Shake Out Operations	Confidential
☒ 402.7 Finishing Operations	Confidential
☒ 402.8 Sand Reclamation	Confidential
☒ 402.9 Dross and Slag Management	Confidential

402.1 Mold and Core Making Operations

B. Description of Operations - MOLD AND CORE MAKING OPERATIONS

Section #	Equipment Name and Manufacturer /Model #	District S# and Applicable NESHAPs Section	NAME OF MATERIALS USED IN MOLDING OPERATIONS					ABATEMENT					
			Binders	Coatings	Adhesives	Mold Release Agents	Other	Source abated	Abatement Required by Permit	A#	Type of Abatement and Purpose of Abatement	Abatement Monitored	Monitoring Parameters
1	187- 4 Mold machine British Molding Machines BMM CT 3	Exempt 40 CFR 63.10886	Confident ial	NA	NA	Confident ial	NA	☐ Yes ☒ No	☐ Yes ☒ No	NA		☐ Yes ☐ No	
.2	187 - 2 Squeezer machines SPO	Exempt 40 CFR 63.10886	Confident ial	NA	NA	Confident ial	NA	☐ Yes ☒ No	☐ Yes ☒ No	NA		☐ Yes ☐ No	
3	187 - 2 Molding machines BMM CT 6	Exempt 40 CFR 63.10886	Confident ial	NA	NA	Confident ial	NA	☐ Yes ☒ No	☐ Yes ☒ No	NA		☐ Yes ☐ No	
4	187 - 2 Core machine Dependable 400 FA, 200SA	Exempt 40 CFR 63.10886	Confident ial	NA	NA	Confident ial	NA	☒ Yes ☐ No	☐ Yes ☒ No	NA		☐ Yes ☐ No	
5	187 - 2 Core machines Redford HS 22 RA	Exempt 40 CFR 63.10886	Confident ial	NA	NA	Confident ial	NA	☒ Yes ☐ No	☐ Yes ☒ No	NA		☐ Yes ☐ No	
6	187 - 6 Core blower systems B & P CB 5	Exempt 40 CFR 63.10886	Confident ial	Confidentia l	Confidential	Confident ial	NA	☒ Yes ☐ No	☐ Yes ☒ No	NA		☐ Yes ☐ No	
7	703 - 2 Shell Molding Machines DSM 3	703 S20, S24 40 CFR 63.10886	Confident ial	NA	Confidential	Confident ial	NA	☐ Yes ☒ No	☐ Yes ☒ No	NA		☐ Yes ☐ No	

A. Description of Operations - MOLD AND CORE MAKING OPERATIONS

Section #	Equipment Name and Manufacturer /Model #	District S# and Applicable NESHAPs Section	NAME OF MATERIALS USED IN MOLDING OPERATIONS					ABATEMENT					
			Binders	Coatings	Adhesives	Mold Release Agents	Other	Source abated	Abatement Required by Permit	A#	Type of Abatement and Purpose of Abatement	Abatement Monitored	Monitoring Parameters
8	703 --Shalco Molding Machine DSM 3	703 S21 40 CFR 63.10886	Confident ial	NA	Confidential	Confident ial	NA	☐ Yes ☒ No	☐ Yes ☒ No			☐ Yes ☐ No	
9	703 - 2 Shalco Molding Machines DSM 3	703 S22, S23 40 CFR 63.10886	Confident ial	NA	Confidential	Confident ial	NA	☒ Yes ☐ No	☒ Yes ☐ No	A7	Carbon Absorption Unit Odor Control	☒ Yes ☐ No	Pressure drop across Carbon units 1<P<9, Temp <110 F Odor level < 60 odor units
10	703 - 2 Beardsley & Piper core mach. SF 6 CA	703 S13, S14 40 CFR 63.10886	Confident ial	NA	NA	Confident ial	NA	☐ Yes ☒ No	☐ Yes ☒ No			☐ Yes ☐ No	
11	703 - 4 Redford core machines HS 16 RA	703 S15, S16, S17, S18 40 CFR 63.10886	Confident ial	NA	NA	Confident ial	NA	☐ Yes ☒ No	☐ Yes ☒ No			☐ Yes ☐ No	
12	187 - Simpson Sand Muller 1.5	187 S-10 40 CFR 63.10886	Confident ial	NA	NA	NA	NA	☒ Yes ☐ No	☒ Yes ☐ No	A10	Baghouse, Pulse Jet Particulate Matter	☒ Yes ☐ No	Weekly visual inspections of A10 are performed on the interior and exterior of the unit for mechanical integrity. The filter bags are visually inspected for rips/tears. Verification of pulse jet activity is verified weekly by the inspector.
13	187 - Omco Sand Mixer MS 1	Exempt 40 CFR 63.10886	Confident ial	NA	NA	NA	NA	☒ Yes ☐ No	☐ Yes ☒ No	A-10	Baghouse, Pulse Jet Particulate Matter	☒ Yes ☐ No	Weekly visual inspections of A10 are performed on the interior and exterior of the unit for mechanical integrity. The filter bags are visually inspected for rips/tears. Verification of pulse jet

													activity is verified weekly by the inspector.
14	187 - Tinker Omega Sand mixer TOM 250	Exempt 40 CFR 63.10886	Confident ial	NA	NA	NA	NA	☒ Yes ☐ No	☐ Yes ☒ No	A-10	Same as #12	☒ Yes ☐ No	Weekly visual inspections of A10 are performed on the interior and exterior of the unit for mechanical integrity. The filter bags are visually inspected for rips/tears. Verification of pulse jet activity is verified weekly by the inspector.

A. Description of Operations - MOLD AND CORE MAKING OPERATIONS

Section #	Equipment Name and Manufacturer /Model #	District S# and Applicable NESHAPs Section	NAME OF MATERIALS USED IN MOLDING OPERATIONS					ABATEMENT					
			Binders	Coatings	Adhesives	Mold Release Agents	Other	Source abated	Abatement Required by Permit	A#	Type of Abatement and Purpose of Abatement	Abatement Monitored	Monitoring Parameters
15	187 - B & P Sand Muller 75 B	187 S-8 40 CFR 63.10886	Confidential	NA	NA	NA	NA	☒ Yes ☐ No	☒ Yes ☐ No	A-1, A-7	Baghouse, Shaking into Carbon Adsorption Odors & Particulate	☒ Yes ☐ No	Pressure drop across Carbon units 1<P<9, Temp <110 F
16	703 - Shell sand coating system B&P Muller	703 S-5 thru S-12 40 CFR 63.10886	Confidential	NA	NA	NA	NA	☒ Yes ☐ No	☒ Yes ☐ No	A-4	Baghouse, Shaking Particulate	☒ Yes ☐ No	Daily - Visual inspection for filter and mechanical integrity and particulate Pressure drop across baghouse
17	1603 - Omco Sand Muller LAM 50	1603 S-14 40 CFR 63.10886	Confidential	Confidential	Confidential	Confidential	NA	☒ Yes ☐ No	☒ Yes ☐ No	A-5, A-3, A-7, A-8	Dry filter, into Baghouse, Pulse Jet into Carbon Adsorption Odors & Particulate	☒ Yes ☐ No	A3 and A7 - Pressure drop across baghouses - 4.5<P<7; A5 - Visual inspection for filter integrity A8 - FID continuous monitoring At 50 ppm in a 90 minute average): Have full load carbon (52,000 lbs.) on standby within 3 business days. At 65 ppm in a 90 minute average change carbon no later than 7 calendar days. At 85 ppm in a 90 minute average - Cease shakeout operations immediately and pouring operations within 2 hours. Maintain Inlet Face velocity into cooling room, minimum 200 ft/min.
18	1603 - No Bake Molding System	1603 S18, S20 40 CFR 63.10886	Confidential	Confidential	Confidential	Confidential	NA	☒ Yes ☐ No	☒ Yes ☐ No	A-3, A-7, A-8	Baghouse, Pulse Jet into Carbon Adsorption Odors & Particulate	☒ Yes ☐ No	A3 and A7 - Pressure drop across baghouses 4.5<P<7; Visual inspection A3 and A7 - Pressure drop across baghouses - 4.5<P<7; Visual inspection A8 - FID continuous monitoring At 50 ppm in a 90 minute average):

													Have full load carbon (52,000 lbs.) on standby within 3 business days. At 65 ppm in a 90 minute average change carbon no later than 7 calendar days. At 85 ppm in a 90 minute average - Cease shakeout operations immediately and pouring operations within 2 hours. Maintain Inlet Face velocity into cooling room, minimum 200 ft/min.
19	1603 - Kloster Core Sand Mixer Type 1	NA 40 CFR 63.10886	Confidential	Confidential	Confidential	Confidential	NA	☒ Yes ☐ No	☐ Yes ☒ No	A-3, A-7, A-8	Baghouse, Pulse Jet into Carbon Adsorption Odor & Particulate Matter	☒ Yes ☐ No	A3 and A7 - Pressure drop across baghouses - 4.5<P<7; Visual inspection A8 - FID continuous monitoring At 50 ppm in a 90 minute average): Have full load carbon (52,000 lbs.) on standby within 3 business days. At 65 ppm in a 90 minute average change carbon no later than 7 calendar days. At 85 ppm in a 90 minute average - Cease shakeout operations immediately and pouring operations within 2 hours. Maintain Inlet Face velocity into cooling room, minimum 200 ft/min.
20	1603 - Omco Core Sand Mixer HMC-5	NA 40 CFR 63.10886	Confidential	Confidential	Confidential	Confidential	NA	☒ Yes ☐ No	☐ Yes ☒ No	NA	Dynamic Air Pulse Cleaner Baghouse Particulate Matter	☒ Yes ☐ No	Daily - Visual Inspection - particulate
21	1603 - Omco Core Sand Mixer MS1	NA 40 CFR 63.10886	Confidential	Confidential	Confidential	Confidential	NA	☒ Yes ☐ No	☐ Yes ☒ No	A-3, A-7, A-8	Baghouse, Pulse Jet into Carbon Adsorption Odor & Particulate Matter	☒ Yes ☐ No	A3 and A7 - Pressure drop across baghouses - 4.5<P<7; Visual inspection A8 - FID continuous monitoring At 50 ppm in a 90 minute average): Have full load carbon (52,000 lbs.) on standby within 3 business days. At 65 ppm in a 90 minute average change carbon no later than 7 calendar days. At 85 ppm in a 90 minute average - Cease shakeout operations immediately and pouring operations

													within 2 hours. Maintain Inlet Face velocity into cooling room, minimum 200 ft/min.

B. Description of Operations – MOLD AND CORE MAKING OPERATIONS

Provide information on binders used in mold and core making operations.

Section #	Name of Binder	Binder Mix Ratio	Name of Source(s) and/or District S# Where Binder Is Used	Product Specification per MSDS
1	Confidential	Confidential	No Bake Systems Plants 187 Cores & 1603 Molding & Cores	VOC CONTENT (%): Confidential PHENOL CONTENT (%): Confidential
2	Confidential2	Confidential	No Bake Systems Plants 187 Cores & 1603 Molding & Cores	VOC CONTENT (%): Confidential PHENOL CONTENT (%): Confidential
3	Confidential	Confidential	No Bake Systems Plants 187 Cores & 1603 Molding & Cores	VOC CONTENT (%): Confidential PHENOL CONTENT (%): Confidential
4	Confidential	Confidential	Plant 703 - Core & Shell molding S13 - S24	VOC CONTENT (%): Confidential PHENOL CONTENT (%): Confidential
5	Confidential	Confidential	Plant 703 - Core & Shell molding S13 - S24	VOC CONTENT (%): Confidential PHENOL CONTENT (%): Confidential
6	Confidential	Confidential	Plant 187 - CO 2 Core Blower System	VOC CONTENT (%): Confidential PHENOL CONTENT (%): Confidential
7	Confidential	Confidential	Plant 187 Molding	VOC CONTENT (%): Confidential PHENOL CONTENT (%):

				Confidential
				VOC CONTENT (%): PHENOL CONTENT (%):
				VOC CONTENT (%): PHENOL CONTENT (%):

C. Management Practices to Reduce Fugitive Emissions – MOLD AND CORE MAKING OPERATIONS

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for core and mold making operations.

Section #	Name of Abatement Device and Manufacturer/Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM
1	187 A8 Baghouse Torit/22,000 cfm	1.Check manometer across baghouse 0<P<7. 2.Visual inspection - internal & external , check cartridge filter integrity and condition. 3.Replace cartridge filters based on inspection and/or changing manometer readings .	1.Weekly 2.SemiAnnual 3.As required, based on inspection
2	187 A7 Carbon Adsorption System Melrose/Blamer Eng. 60,000 cfm	Replace carbon and prefilters based on daily pressure readings across the carbon beds, prefilters and the semi-weekly odor tests	As required - based on monitoring data (1<P<9), Odor test >25 odor units
3	703 A4 Shaker Baghouse Industrial Clean Air/3-700SW	1.Inspect & lube Shaker & Fan bearings, inspect & check sheaves & V belts 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition. Dye check baghouse and replace bags as necessary. Wire brush fan blades.	1.Weekly 2.Quarterly
4	703 A7 Carbon Adsorption System Melrose	Replace carbon and prefilters based on daily pressure readings across the carbon beds, prefilters and the semi-weekly odor tests	As required - based on monitoring data (1<P<9), Odor test >25 odor units
5	187 A10 Baghouse, Pulse Jet 5,600 cfm	1. Check pulse jet pressures 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3. Replace filter bags based on inspection and/or changing manometer readings .	1. Monthly 2. Quarterly 3.As required, based on inspection
6	187 A1 Baghouse, Pulse Jet Industrial Clean Air/30,000 cfm	Monitor carbon prefilters, troubleshoot if necessary. Inspection of the interior of baghouse for structural integrity and fabric bag condition. Replace filter bags as necessary.	Daily Quarterly

7	1603 A3 Baghouse, Pulse Jet Bahnson/Hawley/HE-378-10	1.Check Manometer across baghouse. 2.Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3.Replace bags based on inspection and/or changing manometer readings .	1. Monthly 2. Quarterly 3.As required, based on inspection
8	1603 A7 Baghouse, Pulse Jet Bahnson/Hawley/HE-378-10	Same as #7	1. Monthly 2. Quarterly 3.As required, based on inspection
9	1603 A8 Carbon Adsorption Melrose	Replace carbon and prefilters based on FID, steel output, pressure drops across carbon bed & prefilters checked daily	Permit required - FID >65ppm (PSC policy when FID outlet >20 ppm and/or >700 tons of steel processed)

C. Management Practices to Reduce Fugitive Emissions – MOLD AND CORE MAKING OPERATIONS

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity
1	Sweeping mold & core rooms once per shift, at a minimum.	Contain particulate matter	On going
2	All paved outdoor areas are swept twice per day.	Storage bins containing used sand and/or broken molds are moved and stored outside. Storage areas are swept to remove any spilled or leaking sand, inorder to remove a potential source of airborne particulate matter.	Twice per day
3	Visually check exhaust stacks for particulate and dust.	Insure proper functioning of the baghouse, and identify presence of torn bags or bags that have fallen off.	Daily

402.2 Metal Management

B. Description of Operations - Metal Management

Section #	Name of Non-Exempt Metal or Metal Alloy Used for Production	Metal Type	Method of Verification for Determining Chemical Composition
1	Ferrous Feed Stock (Incoming Scrap) - 100% recycled scrap steel	☒ Ferrous ☐ Non-Ferrous	All 3 plant scrap yards, yearly random sampling of all vendors - composition verified using Optical Emission Spectrometer and carbon anlyzer testing equipment.
2	Ferrous Feed Stock (After Melting) - 100% recycled scrap steel	☒ Ferrous ☐ Non-Ferrous	All Heats- composition verified using Optical Emission Spectrometer and carbon analyzer testing equipment. Off specification material identified by heat analysis initiates additional testing of the feed stock in the scrap yard storage.
3	Ferro Chromium	☒ Ferrous ☐ Non-Ferrous	Product certified by vendor
4	Ferro Manganese	☒ Ferrous ☐ Non-Ferrous	Product certified by vendor
5	Ferro Molybdenum	☒ Ferrous ☐ Non-Ferrous	Product certified by vendor
6	Ferro Vanadium	☒ Ferrous ☐ Non-Ferrous	Product certified by vendor
7	Nickel	☐ Ferrous ☒ Non-Ferrous	Product certified by vendor
8	Molybdenum Trioxide	☐ Ferrous ☒ Non-Ferrous	Product certified by vendor
9	Silicon Manganese	☐ Ferrous ☒ Non-Ferrous	Product certified by vendor
10	Ferro Aluminum	☒ Ferrous ☐ Non-Ferrous	Product certified by vendor
		☐ Ferrous ☐ Non-Ferrous	
		☐ Ferrous ☐ Non-Ferrous	

B. Description of Operations - Metal Management

Describe the facility's metal inspection program, work practice standards and material acquisition plan/procedures upon receipt of scrap or unprocessed metal. Include any pollution prevention management practices and source reduction measures to ensure the metal received is clean.

All Pacific Steel scrap yards are indoors, under cover, to minimize fugitive dust. Only scrap originating from the United States which does not contain motor vehicle scrap is purchased. Each Request for Quote (RFQ) and Purchase Order (PO) provided to a scrap vendor shall include the following;

"Material types not acceptable: Automotive Body Scrap, By-products, cans, cylinders, oil, used oil filters, other lubricants, free organic liquids, cholorinated plastic parts, dirt, engine block components, galvanized, lead components, mercury switches, I-beam, Paint, pipe, plastic, skeleton, tubing, or turnings. Scrap must be lead, mercury and Radiation free."

All 3 plant scrap yards conduct yearly random sampling of all vendors - composition of scrap is verified using Optical Emission Spectrometer and carbon analyzer testing equipment. In addition, all heats are analyzed and the composition is verified. If a descrepant heat analytical result is discovered, additional verification of the scrap used for that heat is conducted. All scrap deliveries to PSC must be visually inspected to make sure that each delivery does NOT contain any of the materials listed above.

If any of the above materials are noted in the delivery, the load is rejected and returned to the suppliers. Any rejected scrap shipments not immediately returned to the supplier, shall be sequestered or visibly marked until the shipment is returned to the vendor.

All scrap yard employees are trained concerning proper metal management handling procedures. Training is conducted yearly.

C. Management Practices to Reduce Fugitive Emissions– Metal Management

Describe control measures to minimize fugitive emissions from scrap or unprocessed metal.

All scrap is stored indoors under cover. At the end of each shift the scrap rooms are first swept with a magnetic sweeper to pick up any metal fines, followed by regular sweeping to contain any dust.

402.3 Furnace Operations

B. Description of Operations - FURNACE OPERATIONS

Section #	Furnace Name and Manufacturer/ Model #	District S# and Applicable NESHAPs Section	Type of Operation	Source abated	Type of Abatement Device	District A#	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
1	187 - Electromelt - Electric Arc Furnace ARC FURNACE QT	187 S-1 40 CFR 63.10895(b) 40 CFR 63.10686	☒ Melting ☐ Heat Treating	☒ Yes ☐ No	Baghouse, Pulse Jet	A-9	Particulate Matter abatement	☒ Yes ☐ No	Grain loading less than 0.0017 grains per dry cubic foot. Pressure drop across the baghouse 2<P<12. Semi annual opacity testing
2	187 - 2 Berkley Steel Heat Treat - HEAT TREATING FURNACES Gas fired heat treat oven	187 S-18 Exempt	☐ Melting ☒ Heat Treating	☐ Yes ☒ No		NA		☐ Yes ☐ No	
3	703 - Electromelt - ELECTRIC ARC FURNACE CQT 7' 1097	703 S-27 40 CFR 63.10895(b) 40 CFR 63.10686	☒ Melting ☐ Heat Treating	☒ Yes ☐ No	Baghouse, Shaking	A-3	Particulate Matter abatement	☒ Yes ☐ No	Pressure drop across the baghouse 1<P<9 Semi annual opacity testing
4	1603 - Whiting EAF Rocker Style ELECTRIC ARC FURNACE 8'-0 R.H. Rocker Tilt	1603 S-1 40 CFR 63.10895(b) 40 CFR 63.10686	☒ Melting ☐ Heat Treating	☒ Yes ☐ No	Baghouse, Pulse Jet	A-1	Particulate Matter abatement	☒ Yes ☐ No	Grain loading less than 0.0033 grains per dry cubic foot. Pressure drop across the baghouse 2<P<12. Semi annual opacity testing
5	1603 - 2 Units - Johnston Gas fired recirculating box type Tempering ovens	Exempt	☐ Melting ☒ Heat Treating	☐ Yes ☒ No	NA	NA		☐ Yes ☐ No	
6	1603 - 5 Units - Johnston Gas fired box type Quench heat treat ovens	Exempt	☐ Melting ☒ Heat Treating	☐ Yes ☒ No	NA	NA		☐ Yes ☐ No	
7	1603 - Johnston 1524 Gas fired Car bottom normalizing heat treat oven	Exempt	☐ Melting ☒ Heat Treating	☐ Yes ☒ No	NA	NA		☐ Yes ☐ No	
			☐ Melting ☐ Heat Treating	☐ Yes ☐ No				☐ Yes ☐ No	

C. Management Practices to Reduce Fugitive Emissions- FURNACE OPERATIONS

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for furnace operations.

Section #	Abatement Device and Manufacturer/Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM
1	187 - A-9 BHA/GE 36,000 cfm	Visual inspection of duct exhaust checking for PM. Verify leak detector supply air and opacity readings, check alarms	Daily
2	A-9 Continued	Visual inspection of ductwork system for leaks. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts	Monthly
3	A-9 Continued	Inspection of the interior of baghouse for structural integrity and fabric bag condition. Dye check baghouse, replace bags as necessary	SemiAnnual
4	703 - A-3 Industrial Clean Air 4-3200AE	Visual inspection of duct exhaust checking for PM.	Daily
5	A-3 Continued	Visual inspection of ductwork system for leaks. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts	Monthly
6	A-3 Continued	Inspection of the interior of baghouse for structural integrity and fabric bag condition. Dye check baghouse, replace bags as necessary	SemiAnnual
7	1603 - A-1 Bahnson Hawley/2-294-14-10	Visual inspection of duct exhaust checking for PM. Verify leak detector supply air and opacity readings, check alarms	Daily
8	A-1 Continued	Visual inspection of ductwork system for leaks. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts	Monthly
9	A-1 Continued	Inspection of the interior of baghouse for structural integrity and fabric bag condition. Dye check baghouse, replace bags as necessary	Semi-annual
10	A-9, A-3, A-1	Drain gear box oil and refill, test run	Yearly

C. Management Practices to Reduce Fugitive Emissions - FURNACE OPERATIONS

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity
1	Baghouse dust bags secured to baghouse outlet	Eliminate fugitive dust. Baghouse dust is transferred from baghouse to dust bag in a closed system	On going
2	Sweeping around baghouse dust collectors	Removal of potential Particulater Matter	Daily

402.4 Forging Operations

B. Description of Operations - FORGING OPERATIONS

Section #	Equipment Name and Manufacturer/ Model #	District S# and Applicable NESHAPs Section	Description of Use	Name of Lubricants and/or Oils	Other Materials Used	Source abated	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
	NA					☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	
						☐ Yes ☐ No			☐ Yes ☐ No	

C. Management Practices to Reduce Fugitive Emissions - FORGING OPERATIONS

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for forging operations.

Section #	Abatement Device and Manufacturer/Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM

C. Management Practices to Reduce Fugitive Emissions - FORGING OPERATIONS

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity

402.5 Casting and Cooling Operations

B. Description of Operations - CASTING AND COOLING OPERATIONS

Section #	Name of Pouring and Cooling Operations and Manufacturer/ Model #	District S# and Applicable NESHAPs Section	Cooling Time of Product or Source	Designated Locations of Cooling Operation	Source Abated	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
1	Casting Pour off area Plant 187	187 S2	A-line 1 hr. minimum B-line 3-24 hrs.	A-line cooling deck, B-line main floor	☒ Yes ☐ No	Baghouse into Carbon Adsorption	Particulate matter and odors	☒ Yes ☐ No	Pressure drop across Carbon units 1<P<9, Temp <110 F
2	Cast mold cooling room Plant 703	703 S30	45 min.	Cooling room	☒ Yes ☐ No	Baghouse into Carbon Adsorption	Particulate matter and odors	☒ Yes ☐ No	Pressure drop across Baghouse 1<P<9 Carbon units 1<P<9, Temp <110 F
3	Cooling Room Plant 1603	1603 S19	23 - 131 hrs. dependant on Sleeve Diameter	Cooling Room	☒ Yes ☐ No	Baghouse into Carbon Adsorption	Particulate matter and odors	☒ Yes ☐ No	A3 and A7 - Pressure drop across baghouses - 4.5<P<7; Visual inspection A8 - FID continuous monitoring At 50 ppm in a 90 minute average): Have full load carbon (52,000 lbs.) on standby within 3 business days. At 65 ppm in a 90 minute average change carbon no later than 7 calendar days. At 85 ppm in a 90 minute average - Cease shakeout operations immediately and pouring operations within 2 hours. Maintain Inlet Face velocity into cooling room, minimum 200 ft/min.
					☐ Yes ☐ No			☐ Yes ☐ No	
					☐ Yes ☐ No			☐ Yes ☐ No	
					☐ Yes ☐ No			☐ Yes ☐ No	
					☐ Yes ☐ No			☐ Yes ☐ No	

C. Management Practices to Reduce Fugitive Emissions - CASTING AND COOLING OPERATIONS

Describe the method to verify adequate cooling times are achieved to ensure minimization of fugitive emissions of particulates and odors prior to commencing shake out operations.

During the design phase of a new part at Pacific Steel Casting, the cooling rate/minimum cooling time is determined. Minimum cooling times are unique to each part. The cooling time is dependent on the mold type, mold size and sleeve size. The cooling time is recorded on all job/part cards. Quality assurance requires all minimum cooling times are achieved. Adequate cooling time is required to avoid hardening, cracking, internal damage or an undesired microstructure in the finished part.

Plant 187 - A Line molding is a batch process. The time each heat/batch is poured is recorded. At all times, the operators verify that each mold has cooled for a minimum of one hour before transfering the mold into the shakeout. During continuous pouring, the time of each heat is recorded, however, the minimum cooling time is achieved due to process constraints. Each batch of molds is poured from a small ladle, filled from the larger furnace ladle. The pouring deck space is limited by the small ladle travel availablity. Molds are lined up in the pouring deck area. As a mold is poured it is moved forward on to the cooling deck. To make space for the just poured mold, the molds already on the cooling deck are shuttled forward one position towards the shakeout. The cooling deck has space for multiple molds. As each batch is poured the molds are moved forward one position, on the cooling deck. During continuous pouring, the process of shuttling forward molds, one position for each heat, takes a minimum of one hour before the mold reaches the shakeout unit. Plant 187 - B line Molds are tagged with the pouring date and time and the time after which shakeout can proceed. Employees verify the tags in order to insure the minimum cooling time has transpired, prior to shaking out the parts.

Plant 703 - The molds are loaded on a continuous conveyor line which circulates around from 1) the mold loading station, 2) to the pouring station, 3) into the cooling room (multiple switch backs are located inside the cooling room which insure the minimum cooling times are achieved), 4) to the automatic shakout unit and 5) back to the mold loading station. If the conveyor is continuously run, the parts are in the cooling room for 45 minutes. During normal operations the conveyor is stopped and started, as each heat is poured, increasing the time molds are in the cooling room.

Plant 1603 - Floor molds are tagged on the flask with the pouring date and time and the time after which shakout can proceed. Tags are verified by employees prior to shakout. Line molds have the heat number written on the side of the molds, as they are poured. The melting reports are used to establish the pouring date and time from which the shakout time is verified.

C. Management Practices to Reduce Fugitive Emissions - CASTING AND COOLING OPERATIONS

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for casting and cooling operations.

Section #	Abatement Device and Manufacturer/Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM
1	187 A8 Baghouse, Pulse Jet Torit Cartridge	1.Check manometer across baghouse. 2.Visual inspection internal & external, check cartridge filter integrity and condition. 3.Replace cartridge filters based on inspection and/or changing manometer readings.	1.Weekly 2.SemiAnnual 3. As required - based on visual inspection findings and/or manometer data
2	187 A7 Carbon Adsorption Melrose/Blamer Eng. 60,000 cfm	Replace carbon and prefilters based on daily pressure readings across the carbon beds, prefilters and the bi-weekly odor tests	As required - based on monitoring data (1<P<9), Odor test >25 odor units
3	703 A2 Baghouse Shaking Industrial Clean Air/10-700 SN	1.Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition. Dye check baghouse, replace bags as necessary. Wire brush fan blades.	1. Weekly 2. Semi-Annual
4	703 A7 Carbon Adsorption Melrose	Replace carbon and prefilters based on daily pressure readings across the carbon beds, prefilters and the bi-weekly odor tests	As required - based on monitoring data (1<P<9), Odor test >25 odor units
5	1603 A3 Baghouse, Pulse Jet Bahnson Hwaley/HE-378-10	1.Check manometer across baghouse. 2.Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3.Replace bags based on inspection and/or changing manometer readings .	1. Quarterly 2. Semi-Annual 3. As required, based on inspection
6	1603 A7 Baghouse, Pulse Jet Bahnson Hwaley/HE-378-10	1.Check manometer across baghouse. 2.Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3.Replace bags based on inspection and/or changing manometer readings	1. Quarterly 2. Semi-Annual 3. As required, based on inspection
7	1603 A8 Carbon Adsorption	Replace carbon and prefilters based on FID, steel output, pressure drops across	Permit required - FID >65ppm (PSC policy

	Melrose	carbon bed & prefilters checked daily	when FID outlet >20 ppm and/or >700 tons of steel prosessed)

C. Management Practices to Reduce Fugitive Emissions - CASTING AND COOLING OPERATIONS

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity
1	Configure door openings & room enclosures to enhance odor capture Plant #187 Pouring room, all 2nd street doors 1-C, & 1-J closed at all times, south doors open on calm days. Plant #703 2-D, 2-J doors closed. Plant #1603 3-A, 3-B, 3-D, 3-E, 3-O doors closed.	Eliminate odors through enhanced capture of casting and cooling fugitive emissions.	Daily
2	Hot molds only stored in designated areas. Plant #187 A line cooling deck or B line floor, Plant #703 inside the cooling room on the conveyor line, Plant #1603 inside the cooling room	Ensure molds are located in areas where odor abatement equipment is located	Continuous

402.6 Shake Out Operations

B. Description of Operations - SHAKE OUT OPERATIONS

Section #	Name of Shakeout Operations and Manufacturer/ Model #	District S# and Applicable NESHAPs Section	Describe Location of Shake Out Operation	Source Abated	A#	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
1	B Shake Out Simplicity M-11	187 S-3	Floor in the middle of B-line cooling room	☒ Yes ☐ No	A-1, A-7	Baghouse into Carbon Adsorption	Particulate matter and odor abatement	☒ Yes ☐ No	Pressure drop across Baghouse 1<P<9 / Carbon units 1<P<9, Temp <110 F
2	A Shake Out Floatex MF7	187 S-4	East end of A-line deck	☒ Yes ☐ No	A-1, A-7	Baghouse into Carbon Adsorption	Particulate matter and odor abatement	☒ Yes ☐ No	Pressure drop across Baghouse 1<P<9 / Carbon units 1<P<9, Temp <110 F
3	Shakeout & Tray Sanding Simplicity OA-10-N	703 S-31	In clean & finish room just outside the cooling room	☒ Yes ☐ No	A-1, A-7	Baghouse into Carbon Adsorption	Particulate matter and odor abatement	☒ Yes ☐ No	Pressure drop across Baghouse 1<P<9 / Carbon units 1<P<9, Temp <110 F
4	Casting Mold Shake Out Station General Kinematics TMTM-96X12-0	1603 S-4	Molding room just outside the cooling room	☒ Yes ☐ No	A3,A7, A-8	Baghouse into Carbon Adsorption	Particulate matter and odor abatement	☒ Yes ☐ No	Pressure drop across baghouses 4.5<P<7; Visual inspection FID continuous monitoring - At 50 ppm in a 90 minute average): Submit evidence of full load carbon (52,000 lbs.) on standby within 3 business days. Maintain the Inlet face velocity at the openings of the pouring and cooling areas at a minimum 200 fpm .
				☐ Yes ☐ No				☐ Yes ☐ No	
				☐ Yes ☐ No				☐ Yes ☐ No	
				☐ Yes ☐ No				☐ Yes ☐ No	
				☐ Yes ☐ No				☐ Yes ☐ No	
				☐ Yes ☐ No				☐ Yes ☐ No	
				☐ Yes ☐ No				☐ Yes ☐ No	

C. Management Practices to Reduce Fugitive Emissions - SHAKE OUT OPERATIONS

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for shake out operations.

Section #	Abatement Device and Manufacturer/Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM
1	187 A1 Baghouse, Pulse Jet Industrial Clean Air	Monitor carbon prefilters. Excessive prefilter pressure can indicate problem with A1 baghouse. Inspection of the interior of baghouse for structural integrity and fabric bag condition, replace bags as necessary	Weekly SemiAnnual
2	187 A7 Carbon Adsorption Melrose	Replace carbon and prefilters based on daily pressure readings across the carbon beds & prefilters and the semi-weekly odor tests	As required - based on monitoring data (1<P<9), Odor test >25 odor units
3	703 A1 Baghouse, Shaker Industrial Clean Air/7-3200AE	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition. Dye check baghouse, replace bags as necessary. Wire brush fan blades.	1.Weekly 2.Quarterly
4	703 A7 Carbon Adsorption Melrose	Replace carbon and prefilters based on daily pressure readings across the carbon beds & prefilters and the semi-weekly odor tests	As required - based on monitoring data (1<P<9), Odor test >25 odor units
5	1603 A3 Baghouse, Pulse Jet Bahnson Hwaley/HE-378-10	1.Check manometer across baghouse. 2.Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3.Replace bags based on inspection and/or changing manometer readings.	1. Monthly 2. Quarterly 3.As required, based on inspection
6	1603 A7 Baghouse, Pulse Jet	1.Check manometer across baghouse. 2.Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3.Replace bags based on inspection and/or changing manometer readings	1. Monthly 2. Quarterly 3.As required, based on inspection
7	1603 A8 Carbon Adsorption Bahnson Hwaley/HE-378-10	Replace carbon and prefilters based on FID, steel output, pressure drops across carbon bed & prefilters checked daily	Permit required - FID >65ppm (PSC policy when FID outlet >20 ppm and/or >700 tons of steel prosessed)

C. Management Practices to Reduce Fugitive Emissions- SHAKE OUT OPERATIONS

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity
1	Plant 187 B line shakout sand piles are frequently loaded into the shakout unit	Minimize the accumulation of sand emissions	On going
2	Plant 1603 Inlet face velocity monitored	Inlet face velocity maintained at a minimum 200 fpm, to insure adequate draw into the shakeout unit and into the control devices	Weekly

402.7 Finishing Operations

B. Description of Operations - FINISHING OPERATIONS

Section #	Type of Operation	District S# and Applicable NESHAPs Section	Describe Location of Finishing Operation	Number of Machines	Abated Source	A#	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
1	☒ Grinding ☐ Welding ☐ Other:	187 S12	North end of Plant 1, clean & finish room	GRINDERS: 7 WELDERS: OTHER:	☒ Yes ☐ No	A4	Baghouse, Shaker	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Visual inspection of stack emissions
2	☐ Grinding ☒ Welding ☐ Other:	187 S13	East Arc-Air Booth in Plant 1 clean & finish room	GRINDERS: WELDERS: 1 OTHER:	☒ Yes ☐ No	A4	Baghouse, Shaker	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Visual inspection of stack emissions
3	☐ Grinding ☒ Welding ☐ Other:	187 S14	West Arc-Air Booth in Plant 1 clean & finish room	GRINDERS: WELDERS: 1 OTHER:	☒ Yes ☐ No	A6	Baghouse, Shaker	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Visual inspection of stack emissions
4	☐ Grinding ☐ Welding ☒ Other: Table Blast	187 S15	South wall in Plant 1 clean & finish room next to furnace	GRINDERS: WELDERS: OTHER: 1	☒ Yes ☐ No	A3	Baghouse, Shaker	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Visual inspection of stack emissions
5	☐ Grinding ☐ Welding ☒ Other: RotoBlast	187 S16, S17	East wall and NW corner in Plant 1 clean & finish room	GRINDERS: WELDERS: OTHER: 2	☒ Yes ☐ No	A2	Baghouse, Shaker	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Visual inspection of stack emissions
6	☐ Grinding ☐ Welding ☒ Other: Rotoblast	703 S32	North-West end of Clean & Finish room	GRINDERS: WELDERS: OTHER: 1	☒ Yes ☐ No	A2 A7	Baghouse Shaker Carbon Adsorption	Particulate Matter Abatement Odor	☒ Yes ☐ No	Daily - Pressure drop across baghouse, Pressure Carbon Unit 1<P<9), Odor test >25 odor units
7	☐ Grinding ☐ Welding	703 S33, S34, S35, S36	West end of Clean and Finish lines	GRINDERS: WELDERS: OTHER: 4	☒ Yes ☐ No	A5	Baghouse Shaker	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Pressure drop across baghouse 1<P<9

	☒ Other: Cut Off Saw									
8	☒ Grinding ☐ Welding ☐ Other:	703 S37, S38, S39, S40	East end of Clean & Finish lines	GRINDERS: 4 WELDERS: OTHER:	☒ Yes ☐ No	A5	Baghouse Shaker	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Pressure drop across baghouse 1<P<9

B. Description of Operations - FINISHING OPERATIONS

Section #	Type of Operation	District S# and Applicable NESHAPs Section	Describe Location of Finishing Operation	Number of Machines	Abated Source	A#	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
9	☐ Grinding ☐ Welding ☒ Other: Tumble Blast	1603 S6	Middle of West Wall	GRINDERS: WELDERS: OTHER: 1	☒ Yes ☐ No	A2 A6	Baghouse Shaking	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Pressure drop across baghouse 1<P<9
10	☐ Grinding ☐ Welding ☒ Other: Table Blast	1603 S5	East Center wall of Clean & Finish room	GRINDERS: WELDERS: OTHER: 1	☒ Yes ☐ No	A2 A6	Baghouse Shaking	Particulate Matter Abatement	☒ Yes ☐ No	Daily - Pressure drop across baghouse 1<P<9
11	☒ Grinding ☐ Welding ☐ Other:	Exempt	5 Grinding stations middle of clean & finish room Plant 187	GRINDERS: 5 WELDERS: OTHER:	☐ Yes ☒ No	NA			☐ Yes ☐ No	
12	☐ Grinding ☒ Welding ☐ Other:	Exempt	8 Welding stations inside Plant 187 Clean & Finsih room	GRINDERS: WELDERS: 8 OTHER:	☐ Yes ☒ No	NA			☐ Yes ☐ No	

13	☐ Grinding ☐ Welding ☒ Other: Plasma Unit	Exempt	West side of Plant 187 Clean & Finsih room	GRINDERS: WELDERS: OTHER: 1	☐ Yes ☒ No	NA			☐ Yes ☐ No	
14	☒ Grinding ☐ Welding ☐ Other:	Exempt	Grinding stations in Plant 187 Cell	GRINDERS: 2 WELDERS: OTHER:	☐ Yes ☒ No	NA			☐ Yes ☐ No	
15	☐ Grinding ☒ Welding ☐ Other:	Exempt	Welding stations in Plant 187 Cell	GRINDERS: WELDERS: 9 OTHER:	☐ Yes ☒ No	NA			☐ Yes ☐ No	
16	☐ Grinding ☐ Welding ☒ Other: Rotoblast.	Exempt	East end of Plant 187 Cell	GRINDERS: WELDERS: OTHER: 1	☒ Yes ☐ No	NA	Baghouse	Particulate Matter	☒ Yes ☐ No	Daily - Visual inspection of stack emissions

B. Description of Operations - FINISHING OPERATIONS

Section #	Type of Operation	District S# and Applicable NESHAPs Section	Describe Location of Finishing Operation	Number of Machines	Abated Source	A#	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
17	☒ Grinding ☐ Welding ☐ Other:	Exempt	South Wall of Tombstone	GRINDERS: 9 WELDERS: OTHER:	☐ Yes ☒ No	NA			☐ Yes ☐ No	
18	☐ Grinding ☐ Welding	Exempt	Middle North Wall of Tombstone	GRINDERS: WELDERS: OTHER: 1	☒ Yes ☐ No	NA	Baghouse	Particulate Matter	☒ Yes ☐ No	Daily - Pressure drop across baghouse

	☒ Other: Shot Blast Mach.									
19	☐ Grinding ☒ Welding ☐ Other:	Exempt	Arc-Air Booths NW corner of Plant 1603 Clean & Finish room	GRINDERS: WELDERS: 2 OTHER:	☒ Yes ☐ No	A2, A6	Baghouse, Shaking	Particulate Matter	☒ Yes ☐ No	Daily - Pressure drop across baghouse
20	☒ Grinding ☒ Welding ☐ Other:	Exempt	Combination grinding/welding booths located on South and West end of Plant 1603 C&F room	GRINDERS: 8 WELDERS: 8 OTHER:	☒ Yes ☐ No	A2, A6	Baghouse, Shaking	Particulate Matter	☒ Yes ☐ No	Daily - Pressure drop across baghouse
21	☐ Grinding ☒ Welding ☐ Other:	Exempt	Welding booths located SE corner of Plant 1603 C&F room	GRINDERS: WELDERS: 4 OTHER:	☒ Yes ☐ No	A2, A6	Baghouse, Shaking	Particulate Matter	☒ Yes ☐ No	Daily - Pressure drop across baghouse
	☐ Grinding ☐ Welding ☐ Other:			GRINDERS: WELDERS: OTHER:	☐ Yes ☐ No				☐ Yes ☐ No	
	☐ Grinding ☐ Welding ☐ Other:			GRINDERS: WELDERS: OTHER:	☐ Yes ☐ No				☐ Yes ☐ No	
	☐ Grinding ☐ Welding ☐ Other:			GRINDERS: WELDERS: OTHER:	☐ Yes ☐ No				☐ Yes ☐ No	

C. Management Practices to Reduce Fugitive Emissions- FINISHING OPERATIONS

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for finishing operations.

Section #	Abatement Device and Manufacturer/Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM
1	187 A2 Baghouse Shaker Industrial Clean Air/6-700	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition.	Quarterly Semi Annual
2	187 A3 Baghouse Shaker Industrial Clean Air/10,000 cfm	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition	Quarterly Semi Annual
3	187 A4 Baghouse Shaker Industrial Clean Air/30,000 cfm	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition	Quarterly Semi Annual
4	187 A6 Baghouse Shaker Industrial Clean Air/8,000 cfm	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition	Quarterly Semi Annual
5	703 A2 Industrial Clean Air/10-700SN	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition /dye check baghouse, replace bags as necessary. Wire brush fan blades.	Quarterly Semi Annual
6	703 A7 Melrose	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition /dye check baghouse, replace bags as necessary. Wire brush fan blades.	Quarterly Semi Annual
7	703 A5 Industrial Clean Air/M-7-800SW	1. Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag	Quarterly Semi Annual

		condition /dye check baghouse, replace bags as necessary. Wire brush fan blades.	
8	1603 A2 Pitter Metal Pulse Jet	1. Inspect & lube fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition / dye check baghouse, replace bags as necessary.	Quarterly Semi Annual
9	1603 A6 Pitter Metal Pulse Jet	1. Inspect & lube fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition / dye check baghouse, replace bags as necessary.	Quarterly Semi Annual

C. Management Practices to Reduce Fugitive Emissions - FINISHING OPERATIONS

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity
1	Run magnetic sweeper followed by Auto Sweeper	Pick up and remove particulate matter from operational area	Twice per shift
2	Visually check exhaust stacks for particulates and dust.	Insure proper functioning of the baghouse, and identify presence of torn bags or bags that have fallen off.	Daily

402.7 Sand Reclamation

B. Description of Operations - SAND RECLAMATION

Section #	Name of Sand Reclamation Equipment and Manufacturer/Model #	District S# and Applicable NESHAPs Section	Describe Type of Sand Reclamation Equipment	Abated Source	A#	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters
1	2 Screens - Vibrating & Rotating Jeffery/Rotex	187 S6, S7	Sand Cooler, 6 screen w/mold release virbrating unit & Rotating sand screen	☒ Yes ☐ No	A1 A7	Baghouse Pulse Jet / Carbon Adsorption	Particulate Matter Odors	☒ Yes ☐ No	Daily visual check for particulates and dust. Carbon units Pressure 1<P<9, Temp <110 F
2	Thermal Recovery Lump Breaker Dependable	703 S45	Lump reducer	☒ Yes ☐ No	A10	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
3	TR Flow Bin - Rejected matl.	703 S46	Magnetic Separator, sand hopper & bucket elevator	☒ Yes ☐ No	A10	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
4	TR Sand Cooler/Air Bed Dependable/VTO JDR	703 S47	Sand Cooler, cooling tower & bucket elevator	☒ Yes ☐ No	A10	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
5	TR Material Handling Equip. Dependable	703 S48	3 hoppers, 3 bucket elevators	☒ Yes ☐ No	A10	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
6	Thermal Recycling Unit Dependable 2 TPH HTCC	703 S49	2 ton per hour gas fired thermal sand reclaimer	☒ Yes ☐ No	A10	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
7	Sand Cooler Classirier Omco Fin Type	1603 S9	Fin type sand cooling system	☒ Yes ☐ No	A4	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
8	2 Sand Conditioning Units B & P Pneu-claim	1603 S10, S11	Pneumatic sand reclaimers	☒ Yes ☐ No	A4	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
9	2 Sand storage silos	1603 S12, S13	Return sand bin, Reclaimed sand bin	☒ Yes ☐ No	A4	Baghouse Pulse Jet	Particulate Matter	☐ Yes ☒ No	Daily visual check for particulates and dust.
				☐ Yes ☐ No				☐ Yes ☐ No	
				☐ Yes ☐ No				☐ Yes ☐ No	

C. Management Practices to Reduce Fugitive Emissions - SAND RECLAMATION

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for sand reclamation making operations.

Section #	Abatement Device and Manufacturer/Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM
1	187 A1 Baghouse Shaking Industrial Clean Air 30,000cf	Monitor carbon prefilters. Increased prefilter pressure indicates A1 baghouse inefficiencies, troubleshoot if necessary. Visual inspection internal (bag condition (holes), linkage wear, excessive build-up, inner shell for holes) & external (outer shell for holes, leaks and seal condition). Replace or repair items based on inspection findings.	Daily Semi Annual
2	187 A7 Carbon Adsorption Melrose	Replace carbon and prefilters as necessary based on odor test & pressure drops across carbon bed & prefilters checked daily	As required - based on monitoring data (1<P<9), Odor test >25 odor units
3	703 A10 Pulse Jet Baghouse Sly/STJ-1511-10	Check pulse jet pressure. Check baghouse and filter cartridge integrity. Replace cartridge filters as necessary.	Weekly Semi Annual
4	1603 A4 Baghouse Pulse Jet Bahnson Hawley HE-210-10	Inspect & lube fan bearings, inspect & check sheaves & V belts. Visual inspection internal (bag condition (holes), linkage wear, excessive build-up, inner shell for holes) & external (outer shell for holes, leaks and seal condition). Replace or repair items based on inspection findings.	Quarterly Semi Annual

C. Management Practices to Reduce Fugitive Emissions - SAND RECLAMATION

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity
1	Plant 187 sand reclaim unit is on the roof of the building. Regular roof inspections are conducted. Roof sweeping is conducted if any sand is observed on the roof.	Remove particulate matter	Weekly

402.9 Dross and Slag Management

B. Description of Operations - DROSS AND SLAG MANAGEMENT

Section #	Material	Describe Location for Cooling of Material	Abated Source	A#	Type of Abatement Device	Purpose of Abatement	Abatement Monitored	Monitoring Parameters	Material Disposition
1	Dross	Do not generate dross - associated with non ferrous metals	☐ Yes ☐ No				☐ Yes ☐ No		☐ Offsite Recycling ☐ Offsite Disposal ☐ Onsite Reprocessing
2	Slag	Plant 187 Between EAF and B line pouring Plant 703 Melting room North end Plant 1603 Pouring room South end	☒ Yes ☐ No	A8, A7 A1, A7 A3, A7, A8	Baghouse into Carbon unit	Particulate matter and odor abatement	☒ Yes ☐ No	187 & 703 - Carbon units Pressure 1<P<9, 703 - Temp <110 F 1603 - Permit required - FID >65ppm (PSC policy when FID outlet >20 ppm and/or >700 tons of steel prosessed)	☒ Offsite Recycling ☒ Offsite Disposal ☐ Onsite Reprocessing

C. Management Practices to Reduce Fugitive Emissions - DROSS AND SLAG MANAGEMENT

Provide description of preventative maintenance (PM) activities including PM schedules and work practice standards for each abatement device for dross and slag operations.

Section #	Abatement Device and Manufacturer/ Model #	Description of Preventative Maintenance Activity and Work Practice Standards	Schedule of PM
1	187 A8 Baghouse, Pulse Jet ToritCartridge	1.Check manometer across baghouse. 2.Visual inspection internal (condition of filter railings and integrity/condition of cartridge filter) & external (frame integrity, diaphragm seal). 3.Replace cartridge filters, based on inspection and/or changing manometer readings .	1.Weekly 2.SemiAnnual 3.As required, based on inspection
2	187 A7 Carbon Adsorption Melrose	Replace carbon and prefilters as necessary based on odor test & pressure drops across carbon bed & prefilters checked daily	As required - based on monitoring data (1<P<9), Odor test >25 odor units
3	703 A2 Baghouse Shaking Industrial Clean Air/10-700 SN	1.Inspect & lube shaker & fan bearings, inspect & check sheaves & V belts. 2. Inspection of the interior of baghouse for structural integrity and fabric bag condition/dye check baghouse, replace bags as necessary. Wire brush fan blades.	1.Weekly 2.Quarterly
4	703 A7 Carbon Adsorption Melrose	Replace carbon and prefilters as necessary based on odor test & pressure drops across carbon bed & prefilters checked daily	As required - based on monitoring data (1<P<9), Odor test >25 odor units
5	1603 A3 Baghouse, Pulse Jet Bahnson Hwaley/HE-378-10	1.Check manometer across baghouse. 2.Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3.Replace cartridge filters based on inspection and/or changing manometer readings	1. Monthly 2. Quarterly 3.As required, based on inspection
6	1603 A7 Baghouse, Pulse Jet Bahnson Hwaley/HE-378-10	1.Check manometer across baghouse. 2.Inspection of the interior of baghouse for structural integrity and fabric bag condition. 3.Replace cartridge filters based on inspection and/or changing manometer readings	1. Monthly 2. Quarterly 3.As required, based on inspection

7	1603 A7 Carbon Adsorption Melrose	Replace carbon and prefilters as necessary based on FID, pressure drops across carbon bed & prefilters checked daily	Permit required - FID >65ppm (PSC policy when FID outlet >20 ppm and/or >700 tons of steel processed)

C. Management Practices to Reduce Fugitive Emissions - DROSS AND SLAG MANAGEMENT

Provide description of other housekeeping measures to abate and/or minimize fugitive emissions of odors and/or particulate matter at sources or source areas.

Section #	Description of Housekeeping Measure	Purpose of Activity	Schedule of Activity
1	Monitor bin loading to avoid overloading	Eliminate spills	On going
2	Sweep area after loading trucks for offsite disposition	Remove particulate matter	Every load pick up
3	Configure door openings & room enclosures to enhance odor capture Plant #187 Pouring room, all 2nd street doors 1-C, & 1-J closed at all times, south doors open on calm days. Plant #703 2-D, 2-J doors closed. Plant #1603 3-A, 3-B, 3-D, 3-E, 3-O doors closed.	Eliminate odors through enhanced capture of slag emissions	Daily

B. Description of Abatement and Control Equipment

Provide a comprehensive list of all abatement and control equipment for operations subject to 12-13-402 and identify the source(s) of operation in which it abates. If the abatement equipment abates multiple sources, provide a detailed description of how the abatement is designated to those sources.

Section #	Name of Abatement Equipment	District A#	Names of Source(s) Abated	District S#	Description of Abatement
1	187 A1 Baghouse	A1	A line Shakeout, B line Shakeout, Sand Muller, Sand reclaim system	S3, S4, S5, S6, S7, S8	Pulse Jet
2	187 A2 Baghouse	A2	Two Rotoblast units located in Clean & Finish room	S16, S17	Shaker
3	187 A3 Baghouse	A3	Table Blast	S15	Shaker
4	187 A4 Baghouse	A4	Cleaning & Grinding Dept., Arc-Air Booth	S12, S13	Shaker
5	187 A6 Baghouse	A6	Arc-Air Booth	NA	Shaker
6	187 A7 Adsorption, Activated carbon	A7	Pouring Area (S2) A line (S4) & B line (S3) shakeouts Sand reclaim (sand cooler,sand screen) (S6, S7) Sand Mixer (S5, S8)	S2, S3, S4, S5, S6, S7, S8	A8 Pulse Jet-S2. A1 Pulse Jet-S3,S4,S5,S6,S7,S8. CA-1, CA-2a and CA-2b Carbon bed-A1 Baghouse and A8 Baghouse.
7	187 A8 Baghouse	A8	Pour off area, main floor	S2	Pulse Jet
8	187 A9 Baghouse	A9	Electric Arc Furnace	S1	Shaker
9	187 A10 Baghouse	A10	Core Sand Muller	S10	Pulse Jet
10	187 E25 Baghouse	Exempt	Plant 1 Cell Rotoblast	NA	Shaker
11	703 A1 Baghouse	A1	EAF Ladle Station w/ canopy hood, Shell Mold Pour Station,Shakeout	S28, S29, S31	Shaker

Section #	Name of Abatement Equipment	District A#	Names of Source(s) Abated	District S#	Description of Abatement
12	703 A2 Baghouse	A2	Cast Mold Cooling Room, Rotoblast	S29, S31	Shaker
13	703 A3 Baghouse	A3	EAF Electirc Arc Furnace	S27	Shaker
14	703 A4 Baghouse	A4	Sand Heater, Sand Coating, Coated sand pug mill, Coated sand vibrating screen, Bucket elevator	S6, S7, S8, S9, S10	Shaker
15	703 A5 Baghouse	A5	Sand silos #1, #2 & loading elevator, Bucket elevator, 4 abrasive cut-off saws, 4 grinders	S1, S2, S3, S4, S33-S40	Shaker
16	703 A10 Baghouse	A10	Sand silo, Lump breaker, flow bin, Sand cooler, Material handling equipment, Thermal recycling unit	S44,S45 S46,S47 S48,S49	Pulse Jet
17	703 T127 Baghouse	Exempt	Shot blast machine	NA	Pulse Jet
18	703 A7 Adsorption, Activated Carbon	A7	EAF Ladle Station w/ canopy hood (S28) Shell Mold Pour Station (S29) Shakeout (S31) Cooling Room (S30) Rotoblast (S32) 2 Shell twin molding machines (S22, S23)	S22,S23 S28,S29 S30,S31 S32	A1 Shaker-S28, S29,S31. A2 Shaker-S30,S32. CA-1 carbon bed-A2 Baghouse. CA-2 & CA-3 Carbon bed-S22,S23 and A1 Baghouse.
19	1603 A1 Baghouse	A1	Electric Arc Furnace	S1	Pulse Jet
20	1603 A2Baghouse	A2	Blast table, Rotoblast, Arc-air booths, Welding booths	S5, S6	Shaker
21	1603 A3Baghouse	A3	Mold Shakout, Sand Mixer utiltizing Techniset binders, Mold coating, Pouring/cooling	S4, S14 S18,S19	Pulse Jet
22	1604 A4 Baghouse	A4	Sand silo #1, Sand cooler, Sand conditioning units #1 & #2, Return sand bin #1 & #2, Sand elevators #1, #2, & #3.	S7, S9, S10,S11 S12,S13 S15,S16 S17	Pulse Jet

Section #	Name of Abatement Equipment	District A#	Names of Source(s) Abated	District S#	Description of Abatement
23	1604 A5 Baghouse	A5	Sand Mixer utilizing Techiset Binders	S14	Dry Filter
24	1603 A6 Baghouse	A6	Blast table, Tumble blast, Arc-air booths, Welding booths	S5, S6	Shaker
25	1603 A7 Baghouse	A7	Mold Shakeout, Sand Mixer utiltizing Techniset binders, Mold coating, Pouring/cooling	S4, S14 S18,S19	Pulse Jet
26	1603 A8 Adsorption, Activated Carbon	A8	Mold Shakeout (S4) Sand Mixer utiltizing Techniset binders (S14) Mold coating (S18) Pouring/cooling (S19)	S4, S14 S18,S19	A3 and A7 Pulse Jet-S4,S14,S18 and S19. CA-1, CA-2 and CA-3 Carbon bed-A3 Baghouse and A7 Baghouse.

Technical Data

12-13-403.1

A. *Process Flow Diagram* – Facilities must indicate all operations in Section 12-13-402, the flow of materials used and identify all monitoring of processes, abatement and controls to minimize emissions beginning from material receipt to achievement of final product. Identify all abatement and control devices by District source numbers according to District Permit or as exempt from District Permit.

B. *Facility Layout / Floor Plan* - Facilities must indicate all relative locations of processing equipment and monitoring and controls, all permitted and exempt sources identified in the process flow diagram per Section 12-13-403.1.1 and any other source(s) that may contribute to particulates and odors. Include all building walls, partitions, doors, windows, vents and openings and indicate all areas that have abatement for particulates and odors. Identify all metal melting and processing equipment by District source numbers according to District Permit or as exempt from District Permit.

A. Process Flow Diagram

AppendixB - Confidential

B. Facility Layout / Floor Plan

AppendixC - Confidentials.

Fugitive Emissions Reductions Previously Realized

12-13-403.2

Facilities must provide a description of the equipment, processes and procedures installed or implemented within the last five years to reduce fugitive emissions. Include the purpose for implementation and detail any employee training that was conducted for that equipment, process or procedure and the frequency of any ongoing training.

12-13-403.2 FUGITIVE EMISSIONS PREVIOUSLY REALIZED

Section #	Identify Type of Operation per Section 12-13-402	Description of Equipment, Processes or Procedures Previously Realized	Implementation Date	Purpose of Implementation	Employee Training Conducted	Description of Employee Training and Frequency of Training
1	Mold & core making, metal management, Furnace operations, casting & cooling, shakeout, finishing, Sand reclaim, Slag	Odor Management Plan approved by BAAQMD	10/03/2008	Reduce odors and particulate matter.	☒ Yes ☐ No	All employees trained after initial roll out. Yearly refresher training is conducted. Plan elements are also incorporated into PSC operating procedures. Job specific training is included during PSC operating procedure training, when conducted.
2	Mold & core making, casting & cooling, shakeout, Sand reclaim	Plant 1603 change to lower VOC binder;	2008	Reduce VOC emissions	☒ Yes ☐ No	Initial training to make employees aware of the sand recipe change.
3	Furnace operations	Plant 1603 EAF Room fume collection collection installed;	2008	Increase capture efficiency of odors and particulate matter	☒ Yes ☐ No	Maintenance trained on equipment PM
4	Mold & core making, casting & cooling, shakeout, Sand reclaim	Plant 703 precoated sand changed to lower VOC product	2009	Reduce VOC emissions	☒ Yes ☐ No	Employees trained on new MSDS after change.
5	Casting & cooling, shakeout	Plant 187 Main Floor fume collection directed to baghouse and carbon unit	2010	Increase capture efficiency of odors and particulate matter	☒ Yes ☐ No	Maintenance trained on equipment PM
6	Mold & core making	Plant 187 Core Room baghouse installed.	2010	Abate core room particulate matter.	☒ Yes ☐ No	Maintenance trained on equipment PM
					☐ Yes ☐ No	
					☐ Yes ☐ No	
					☐ Yes ☐ No	

Schedule for the Implementation of the EMP Elements

12-13-403.3

A. Provide a list of existing or current EMP elements in place pursuant to and under a District Authority to Construct as of the initial date of EMP submittal (on or before May 1, 2014). Include a description, the purpose and schedule of the element(s).

B. Provide a list of new or future EMP elements to be implemented following APCO approval of the EMP. Include a description, the purpose and schedule of the element(s) to be implemented.

A. 12-13-403.3.1 SCHEDULE FOR THE IMPLEMENTATION OF THE EMP ELEMENTS (on or before May 1, 2014)					
Section #	Identify Type of Operation per Section 12-13-402	List Specific Elements to be Implemented on or before May 1, 2014	Implementation Date	Description of Elements to be Implemented	Purpose of Implementation
	NA				

B. 12-13-403.3.2 NEW OR FUTURE EMP ELEMENTS TO BE IMPLEMENTED

Section #	Identify Type of Operation per Section 12-13-402	List Specific Elements to be Implemented Following APCO Approval of the EMP	Implementation Date	Description of Elements to be Implemented	Purpose of Implementation
1	Mold and Core Making - 703	Consider installation of ventilation hoods over S-19 and S-26	To Be Determined	Working with Engineering and District Staff to determine equipment capabilities and permit requirements for implementation/installation of hoods over S-19 and S-26	Further reduce fugitive emissions of PM and odors
2	Casting and Cooling - 187	Consider installing wall to isolate pouring operations in Plant 1	To be Determined	Working with Engineering and District Staff to determine feasibility and permit requirements for implementation/installation of wall	Further reduce fugitive emissions of PM and odors
3	Mold ShakeoutSand Mixer utiltizing Techniset binders Mold coating Pouring/cooling - 1803	Consider increasing carbon system capacity which affects: Mold Shakeout (S4) Sand Mixer (S14) Mold coating (S18) Pouring/cooling (S19)	To be Determined	Working with Engineering and District Staff to determine equipment capabilities and permit requirements for implementation	Improve abatement capacity
4	Sand Reclamation - 703	Consider connecting Sand Reclamation Unit (S-49) to Carbon Unit	To be Determined	Working with Engineering and District Staff to determine equipment capabilities and permit requirements for implementation	Further reduce fugitive emissions of PM and odors

Compliance Schedule for the EMP

12-13-404

A. *APCO Recommendations to EMP and Determination of Approvability–* Acknowledge acceptance or rejection of each of the APCO's recommendations. For each of the accepted recommendations, describe the measures to be implemented and include the date of proposed implementation. If the facility rejects a recommendation, provide a detailed basis for that rejection.

A. APCO Recommendations to EMP and Determination of Approvability (12-13-405)

Date of EMP: **5/19/15**

Provide determination of acceptance to APCO recommendations. Include the determination of acceptance by the facility's Responsible Manager and the basis for rejecting any APCO recommendations. If recommendation is accepted, include measures to implement APCO recommendation and the proposed date of implementation.

Section #	(FOR APCO USE ONLY) APCO Recommendation	Acceptance of APCO Recommendation	If NO: Basis for Rejecting APCO Recommendation	If YES: Measures to Implement Recommendation	Proposed Date of Implementation	(APCO USE ONLY) APCO Approval of Response
1	**Plant 1:** Ensure pouring and cooling emissions are abated by not storing or pouring molds near the electric arc furnace. Designate a specific area that is acceptable for this operation that ensures all fugitive emissions are abated by carbon. Provide employee training on designated acceptable pouring and cooling areas.	☒ Yes ☐ No	N/A	Will incorporate "limit lines" to designate specific areas that are acceptable for pouring and cooling operations and provide signage and employee training as needed.	06/01/2016	☒ Yes ☐ No
2	**Plant 1:** Broken molds and sand should not be stored in large stockpiles next to Line B shakeout station. Use best management practices by shaking out molds one at a time to ensure emissions are abated and odors are minimized.	☒ Yes ☐ No	N/A	Will purchase new "boxes" to minimize the need for "premature shakeout/stockpiling" due to equipment needs.Will perform employee training as needed. Items are contingent on market conditions. ***District Response:*** *Please confirm employee training will include best management practices to shake out one mold at a time. Clarify how additional boxes will prevent storage of large stockpiles of broken molds and sand.*	06/01/2016	☐ Yes ☒ No
		☐ Yes ☐ No		New boxes will be used to hold molds until they are cooled, then transport molds for shake-out. Spent sand will be reused or disposed of as soon as it is generated. New boxes will minimize the need for immediate emptying of 'used' boxes, and in turn, ensure that molds are shaken out one or two at a time since 'used' boxes will not be immediately needed. Employee training will include best management practices to ensure pre-mature shake-out does not occur.	06/01/2016	☒ Yes ☐ No

3	**Plant 1:** All plastic strips must be completely attached along Line A shakeout to minimize fugitive emissions during the shakeout operation.	☒ Yes ☐ No	N/A	Will order and replace plastic strips attached along Line A Shakeout as needed. Items are contingent on market conditions. ***District Response:*** *Understanding market conditions, facility's inventory should include a continuous surplus of plastic strips to ensure fugitive emissions are minimized.*	02/01/2016	☐ Yes ☒ No
		☐ Yes ☐ No		Facility will store plastic strips in maintenance inventory. Exact amount of inventory will be adjusted as usage needs are identified but will be in the 10% range.	02/01/2016	☒ Yes ☐ No
4	**Plant 1 and 2:** Install FID monitors to record inlet and outlet concentrations of the carbon abatement system. Use data to determine carbon change out schedules.	☒ Yes ☒ No	Current methods used to determine carbon change-outs are adequate. They include: Plant 1 - Daily Pressure Differential Checks for Carbon Beds CA-1, CA-2a and CA-2b Daily Pressure Differential Checks for Pre-filters for CA-1 and CA-2b Daily Temperature Checks for Carbon Beds CA-1, CA-2a and CA-2b Daily AMPs Checks for fans A and B Bi-weekly Odor Tests for Carbon Unit Plant 2 - Daily Pressure Differential Checks for Carbon Beds CA-1, CA-2 and CA-3 Daily Pressure Differential Checks for Pre-filters for CA-1 and CA-2 and CA-3 Daily Temperature Checks for Carbon Bed CA-1 Daily AMPs Checks for fans CA-1, CA-2 and CA-3 Bi-weekly Odor Tests for Carbon Unit ***District Response:*** *Historically, current methods have not assured timely carbon change-outs. The addition of FID monitoring will help to determine carbon change out schedule.*	N/A	N/A	☐ Yes ☒ No

		☐ Yes ☐ No		Will consider relocating the "extra" FID Unit from Plant 3 to Plant 2 and also the installation of a New FID Unit in Plant 1 after an onsite consultation with BAAQMD Engineers. Consultation will take place by 06/01/2016	04/01/2020	☒ Yes ☐ No
5	**Plant 2:** Capture and abate emissions from shell and core molding operations. Types of abatement to consider include, but are not limited to baghouses and carbon adsorption units.	☐ Yes ☐ No	N/A	Partial - We are evaluating our current systems and will consider baghouses and carbon absorption units if assessment deems it beneficial. Items are contingent on market conditions. ***District Response:*** *Identify the evaluation being conducted and the date of its completion in order to complete installation of baghouse and carbon adsorption units by 2020.* *Installation of FID monitoring under Section #4, could occur in conjunction with additional work to capture and abate emissions from shell and core molding operations.*	04/01/2020	☐ Yes ☒ No
		☐ Yes ☐ No		Ventilation equipment efficiency will be evaluated by 12/31/2016. The addition of another carbon unit is also being considered. Will contact the Air District Engineer as well as PSC Engineer to evaluate and make recommendations. Evaluation will be completed by 12/31/2016	04/01/2020	☒ Yes ☐ No
6	**Plant 1, 2, and 3:** To ensure fugitive emissions are minimized, evaluate all open vents and doors and identify which openings can be closed when not in use.	☒ Yes ☐ No	N/A	Will evaluate all open vents, doors and identify which openings can be closed when not in use. Will also incorporate signage and provide employee training as needed Items are contingent on market conditions..	06/01/2016	☒ Yes ☐ No
7	**Plant 1, 2, and 3:** Install bag break detectors and audible alarms at all baghouses.	☐ Yes ☐ No	N/A	Partial - Will consider installing bag break detectors and audible alarms at furnace baghouses. Items are contingent on market conditions. ***District Response:*** *Provide the date of completion of the evaluation to install bag break detectors and audible alarms at furnace baghouses by 2020.*	04/01/2020	☐ Yes ☒ No

		☐ Yes ☐ No		Evaluation will be completed by 12/31/2016	04/01/2020	☒ Yes ☐ No
8	**Plant 3:** Close interior door between molding and finishing room to minimize fugitive emissions.	☒ Yes ☐ No	N/A	Will close the door between molding and finishing room and provide signage and employee training as needed.	02/01/2016	☒ Yes ☐ No
9	**Plant 3:** All molds must be completely processed in the shake out station before shutting down and turning off the shake out.	☒ Yes ☐ No	N/A	Shakeout station will be emptied before shutting down and turining off the shakeout. Employee training will be performed as needed.	08/01/2015	☒ Yes ☐ No
10	Provide onsite staff with training through the California Air Resource Board (CARB) to obtain and maintain a visible emissions evaluation (VEE) certification in accordance with US EPA Method 9.	☒ Yes ☐ No	N/A	Will provide key personnel with Visible Emissions Evaluation training through California Air Resources Board	06/01/2016	☒ Yes ☐ No
11	To ensure fugitive emissions are minimized, evaluate all open vents and doors and identify which openings can be closed when not in use. Include the results from this evaluation as future measures to reduce fugitive emissions when updating the EMP per Section 410.	☒ Yes ☐ No	N/A	Will evaluate all open vents and doors and identify which openings can be closed when not in use. Will include the results as future measures to reduce fugitive emissions when updating the EMP. Will provide signage and training as needed.	06/01/2016	☒ Yes ☐ No
12	**Plant 2 and 3:** Capture and abate emissions from the ladle transfer operations. Consider abating emissions through an existing baghouse at each facility.	☐ Yes ☐ No	Clarification needed... ***District Response:*** *Plant #1's ladle transfer operation was abated to reduce emissions. The District recommends the facility to capture and abate emissions from these operations, as undertaken in Plant #1.*			☐ Yes ☒ No

		☐ Yes ☐ No		Contacted the Air District Engineer. Will set up an onsite evaluation to take place by 06.01.2016 as well as the PSC Engineer to evaluate and make recommendations. Will determine next course of action after the evaluation.	04/01/2020	☒ Yes ☐ No

Appendix

If additional information are to be included in the EMP, identify the associated Appendix # as "*#*" in the text box of the specific table.

In the table below, note the Appendix # and provide the Page # and Section # of the EMP where the material references.

Appendix #	Reference to Page # and Section # of EMP
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Appendix # A

Reference to Page #9, **Section #** Confidential