

# Emissions Minimization Plan

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

United States Pipe and Foundry Company, LLC

District Site #A0083  
1295 Whipple Road  
Union City, CA 94587  
Rev 2: June 22, 2022

- Public Copy  
 Confidential Copy

# Table of Contents

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Responsible Manager Certification.....	4
Designation of Confidential Business Information.....	5
Company Description.....	6
Company Organizational Chart and Schedule of Management Operators	
A. Company Organizational Chart.....	8
B. Schedule of Management Operators.....	8
Contents of the EMP	
A. Operations Subject to EMP and Schedule of Operations.....	10
402.1 Mold and Core Making Operations.....	11
B. Description of Operations.....	12
C. Management Practices to Reduce Fugitive Emissions.....	14
402.2 Metal Management.....	16
B. Description of Operations.....	17
C. Management Practices to Reduce Fugitive Emissions.....	20
402.3 Furnace Operations.....	22
B. Description of Operations.....	23
C. Management Practices to Reduce Fugitive Emissions.....	25
402.5 Casting and Cooling Operations.....	33
B. Description of Operations.....	34
C. Management Practices to Reduce Fugitive Emissions.....	35
402.7 Finishing Operations.....	42
B. Description of Operations.....	43
C. Management Practices to Reduce Fugitive Emissions.....	44
402.9 Dross and Slag Management.....	51
B. Description of Operations.....	52
C. Management Practices to Reduce Fugitive Emissions.....	54
D. Description of Abatement and Control Equipment.....	56
Technical Data.....	57
A. Process Flow Diagram.....	57
B. Facility Layout/Floor Plan.....	57
Five Year review of the EMP: Schedule for the Implementation of the EMP Elements and Fugitive Emissions Reductions 12-13-410.....	58
A. 12-13-410 Schedule for the Implementation of the EMP Elements and Fugitive Emissions Reductions realized within the last 5 years.....	59
B. 12-13-410 New or Future EMP Elements to be Implemented.....	61
Appendix.....	62
Attachment 1-Company Organizational Chart.....	63



# Responsible Manager Certification

## 12-13-404.1

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*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: 6/24/22

Rex Carpenter, Plant Manager

*Responsible Manager*

# Designation of Confidential Business Information

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

<b>Name of Section / Page Number(s)</b>	<b>Description of Confidential Information</b>

# Company Description

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United States Pipe and Foundry Company, LLC (US Pipe) owns and operates an iron foundry in Union City, California (UC) for the production of ductile iron pipe. Iron scrap is melted in a cupola furnace and the molten metal is cast into pipe using reusable molds.

US Pipe is classified as a Large Foundry and is subject to air emission regulations described in the Code of Federal Regulations, Title 40 of the Code of Federal Regulations, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries Area Sources, Part 63, Subpart ZZZZZ.

The facility is also subject to the newly promulgated Bay Area Air Quality Management District (BAAQMD) Regulation 12-13: Miscellaneous Standards of Performance for Foundry and Forging Operations. The purpose of this Rule is to require the development of and compliance with Emissions Minimization Plans designed to minimize the fugitive emissions of particulate matter and odorous substances from foundries and forges operating within the District.

As part of Regulation 12-13 requirements, the facility reported to the BAAQMD the list of the operations, processes, and equipment used for its Metal Melting, Tapping and Mold and Core Making Operations which are subject to 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, Section 63.10895(b). In addition, this facility submitted to the BAAQMD a copy of its written Operation and Maintenance Plan that was required by the US EPA Administrator pursuant to 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel, Section 63.10896.

This Emission Minimization Plan (EMP) is developed pursuant to Regulation 12-13. This EMP details the management practices, measures, equipment and procedures that are employed or are scheduled to be implemented to minimize fugitive emissions of particulate matter and of odorous substances, as prescribed in the regulations, particularly in Sections 12-13-402 and 403.

As stipulated in the regulation, this EMP has to be reviewed by the BAAQMD Air Pollution Control Officer (APCO) for completeness. Once deemed complete, the APCO shall make the complete Plan available for public comment. Thus, this EMP must also be revised accordingly based on comments received from the public and APCO's recommendations, if any, for additional processes and procedures to further reduce or prevent fugitive emissions from the foundry based on technical and economic feasibility, and made in consideration of worker health and safety.



# Company Organizational Chart and Schedule of Management Operators

## 12-13-403.1.3

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- 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. Label the attachment with the corresponding Attachment #.

**Attachment # 1**

- 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.

**Onsite Responsible Manager(s)**

Name:  
Title: Plant Manager  
Phone:  
Email:  
Schedule/Shift:

Name:  
Title: Operational Excellence Manager  
Phone:  
Email:  
Schedule/Shift:

**Onsite Alternate Contact(s)**

Name:  
Title: Maintenance Manager  
Phone:  
Email:  
Schedule/Shift: (varies)

Name:  
Title: Environmental Engineer  
Phone:  
Email:  
Schedule/Shift:



# Contents of the EMP

## 12-13-403

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The owner or 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 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.

<b>Operation</b>	<b>Schedule of Operations</b>
<input checked="" type="checkbox"/> 402.1      Mold and Core Making Operations	
<input checked="" type="checkbox"/> 402.2      Metal Management	
<input checked="" type="checkbox"/> 402.3      Furnace Operations, including tapping and pouring	
<input type="checkbox"/> 402.4      Forging Operations	
<input checked="" type="checkbox"/> 402.5      Casting and Cooling Operation	
<input type="checkbox"/> 402.6      Shake Out Operations	
<input checked="" type="checkbox"/> 402.7      Finishing Operations	
<input type="checkbox"/> 402.8      Sand Reclamation	
<input checked="" type="checkbox"/> 402.9      Dross and Slag Management	

## 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	RJ Machinery Co. Inc Model#2436	FS-53 (Exempt) N/A		None	None	None	None	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		None	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
2	RJ Machinery Co. Inc Model#2436	FS-54 (Exempt) N/A		None	None	None	None	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		None	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3	RJ Machinery Co. Inc Model#2436	FS-55 (Exempt) N/A		None	None	None	None	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		None	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4	RJ Machinery Co. Inc Model#2436	FS-56 (Exempt) N/A		None	None	None	None	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		None	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5	RJ Machinery Co. Inc Model#2436	FS-57 (Exempt) N/A		None	None	None	None	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		None	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
6	RJ Machinery Co. Inc Model#2436	FS-81 (Exempt) N/A		None	None	None	None	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		None	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	Core Coating Model# Unknown	FS-58 (Exempt) N/A	None	None	None	None	None	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		None	<input type="checkbox"/> Yes <input type="checkbox"/> No	

## 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	Resin Coated Sand		S-53 (Exempt)	VOC CONTENT (%): 0.492 lb/ton of sand  PHENOL CONTENT (%): 0.189 lb/ton of sand
2	Resin Coated Sand		S-54 (Exempt)	VOC CONTENT (%): 0.492 lb/ton of sand  PHENOL CONTENT (%): 0.189 lb/ton of sand
3	Resin Coated Sand		S-55 (Exempt)	VOC CONTENT (%): 0.492 lb/ton of sand  PHENOL CONTENT (%): 0.189 lb/ton of sand
4	Resin Coated Sand		S-56 (Exempt)	VOC CONTENT (%): 0.492 lb/ton of sand  PHENOL CONTENT (%): 0.189 lb/ton of sand
5	Resin Coated Sand		S-57 (Exempt)	VOC CONTENT (%): 0.492 lb/ton of sand  PHENOL CONTENT (%): 0.189 lb/ton of sand
6	Resin Coated Sand		S-81 (Exempt)	VOC CONTENT (%): 0.492 lb/ton of sand  PHENOL CONTENT (%): 0.189 lb/ton of sand

**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	None		
2	None		
3	None		
4	None		
5	None		
6	None		
7	None		

**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.

<b>Section #</b>	<b>Description of Housekeeping Measure</b>	<b>Purpose of Activity</b>	<b>Schedule of Activity</b>
1	Sweeping of ground	To cleanup dirt and spillages	Daily; once a day at end of production

## 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	Scrap metals: Cut plate & structural steel; Foundry steel Busheling steel; Motor blocks less transmissions; Shredded auto bodies (frag).	<input checked="" type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	Once scrap metals have been melted and become a molten iron, cup samples are taken and analyzed for the metal chemistry in an Spectro machine.
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> Non-Ferrous	
		<input type="checkbox"/> Ferrous <input type="checkbox"/> 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.

US Pipe Union City Pipe Plant has a metallic scrap broker (Morris Iron and Steel Co., Inc) chosen as the exclusive agent for procuring scrap at U.S. Pipe's Union City plant. A Materials Acquisition Program has been developed that requires scrap to be free, to the extent practicable, of organics (such as plastics and petroleum-based oils) and HAP metals (such as mercury and lead).

For organics, the scrap supplier shall, to the extent practicable, remove plastics and ensure scrap materials are drained free of liquids. For HAP metals, the scrap supplier shall, to the extent practicable, remove accessible mercury switches from trunks and hoods of automotive bodies and also, to the extent practicable, remove lead components such as batteries and lead wheel weights.

Facility has no scrap certification program but has a scrap inspection and scrap materials acquisition program. U.S. Pipe representatives responsible for the handling and processing of scrap materials and familiar with scrap quality (melting supervisors, crane operators, crane followers, etc.) shall do a visual inspection on each shipment of scrap materials that arrives at U.S. Pipe plant in Union City. The U.S. Pipe inspectors shall use the Scrap Receiving Form in conducting their visual inspections prior to receiving the scrap delivery. The inspection shall consist of a visual observation of random scrap shipments to ensure that the scrap material, to the extent practicable, does not contain free flowing liquids, visible mercury switches, visible lead wheel weights, or visible battery parts. Scrap materials containing free-flowing liquids, visible mercury switches, visible lead wheel weights, or visible battery parts are rejected. If US Pipe representative's inspection warrants a scrap rejection, US Pipe will call the scrap broker about the rejection and the reasons for the rejection.

US Pipe employees are given verbal instructions (training) as needed to ensure they know and understand work practice standards and metal management procedures. A review of procedures with the employees is also done whenever there is a change in scrap specifications (e.g., a change in spec's for scrap sizes).

Sampling and analyzing of scrap metal as per delivery is not conducted; however, once scrap metals have been melted and become a molten iron, cup samples are taken and analyzed for the metal chemistry in an Spectro machine. If metal chemistry problem is encountered and the scrap metal delivered is the suspect, a sample is taken from the scrap pile to be analyzed for metal chemistry in an Spectro machine.



### **C. Management Practices to Reduce Fugitive Emissions – METAL MANAGEMENT**

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

1. Footprint of the scrap metal pile has been reduced and scrap materials are stockpiled close to S-1 Cupola charging area. This measure eliminates the double movements of the scrap metal thus, reducing fugitive emissions from the extra movement of the scrap material from one pile to another pile.
2. Scrap delivery is limited to times between 6:00 AM and 2:00 PM only. By curtailing the scrap delivery time, the duration of fugitive emission during deliveries is reduced to eight hours only, instead of more than eight hours.
3. A water truck is used routinely for dust control at least once daily, or whenever the roads become dusty.
4. A street sweeper vehicle is used to wet sweep twice per week, or whenever the paved roads become dusty.
5. The area between the A-13 baghouse and the slag shed has been paved.



## 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	Cupola		<input checked="" type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Afterburner Cupola Baghouse Ductile Baghouse	A-3, A-13 A-10	Combust carbon monoxide; combust any trace amounts of VOC or oil from engine blocks and scrap metals; control particulate matter emissions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Continuous temperature monitor; A-3 Afterburner temperature at 1550 deg F whenever S-1 Cupola is in operation  Daily A-13 visible emission monitoring (Method 22); Ringelmann No.1 opacity <= 3 minutes aggregated in any hour  Continuous A-13 Baghouse differential pressure monitor; maintain pressure differential between 0.25 to 8 inches of water column  Daily preventive maintenance records for A-13  Monthly inspection of A-13 baghouse (NESHAP)  Semi-annual opacity testing (Method 9) for fugitive emissions from furnace building (NESHAP)  Weekly preventive maintenance records for A-10  Weekly A-10 visible emission monitoring (Method 22); Ringelmann No.1 opacity <= 3 minutes aggregated in any hour  A-13 Source test for Particulate Matter every five years
2	Annealing Oven	S-15 None	<input type="checkbox"/> Melting <input checked="" type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No	None			<input type="checkbox"/> Yes <input type="checkbox"/> No	Monthly visible emission monitoring (Method 22); Ringelmann No.1 opacity <= 3 minutes aggregated in any hour
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	

			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Melting <input type="checkbox"/> Heat Treating	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> 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	Afterburner-North American 214-8A	Clean/scrape dust buildup  Replace thermocouples as needed	Clean every eight weeks
2	Baghouse-GMD Model #289-14-6WI	Baghouse inspection Baghouse cleaning cycles and bag changes Clean/empty hoppers	Daily inspection of the double flap airlocks for continuous operations; checking of screw conveyor if working; checking for system air leaks; checking for static pressure and baghouse differential pressure; checking the smokestack for any visibles;.  The baghouse cleaning cycle is based on baghouse differential pressure. Baghouse will start cleaning when the preset diffrentail pressure (3 IWC) is attained,  Daily cleaning/emptying of baghouse hoppers; sweeping of the floors and cleaning the area.
3	Baghouse-Harsell Baghouse (Custom Built)	Baghouse Inspection Clean/empty hoppers	Weekly inspection of the baghouse; checking if dampers open and

	<p>Baghouse has no broken bag leak detectors</p>		<p>close; checking for compressed air leak; checking for excessive ID fan vibration; visual inspection of shakers;checking baghouse differential pressure.</p> <p>The baghouse cleaning cycle is based on timer. Baghouse will start cleaning at preset times: 3 seconds shake for one section and 10 minutes break; then 3 second shake for the second section and 10 minutes break, etc. (Drum Switch Cycle).</p> <p>Clean/empty at least once a year.</p>


**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	Cleaning of baghouse berm area and pavement.	This is a housekeeping activity to keep the area clean from dust coming from loading/unloading of scrap metals and foundry operations.	Daily; once a day at end of production.

## 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
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No	
						<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> 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.

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

**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.

<b>Section #</b>	<b>Description of Housekeeping Measure</b>	<b>Purpose of Activity</b>	<b>Schedule of Activity</b>



## 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 Machine #171 (Model- Custom Built)	FS-44 District Exempt No Applicable NESHAPs	25 secs	Main Manufacturing Building - Casting Area	<input type="checkbox"/> Yes <input type="checkbox"/> No	None		<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	Casting Machine #172 (Model-Custom Built)	FS-45 District Exempt No Applicable NESHAPs	25 secs	Main Manufacturing Building - Casting Area	<input type="checkbox"/> Yes <input type="checkbox"/> No	None		<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	Casting Machine #173 (Model-Custom Built)	FS-46 District Exempt No Applicable NESHAPs	27 secs	Main Manufacturing Building - Casting Area	<input type="checkbox"/> Yes <input type="checkbox"/> No	None		<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Casting Machine #174 (Model-Custom Built)	FS-47 District Exempt No Applicable NESHAPs	35 secs	Main Manufacturing Building - Casting Area	<input type="checkbox"/> Yes <input type="checkbox"/> No	None		<input type="checkbox"/> Yes <input type="checkbox"/> No	
					<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> 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.

Our casting is done inside steel molds in the casting machines. The bell-shape-end of the pipe is the only part made of core sand mold. This sand mold is broken when the cast pipe is pulled out from the casting machine by means of a mechanical pipe puller at the end of the casting cycle. There is no shake-out operations.

Our casting machines have a cooling cycle by design and we do not have to wait an extra time to cool the sand mold. As soon as casting machine goes downhill after spinning the molten iron to make it hard enough, the cast pipe is pulled out from the steel mold by the mechanical pipe puller.

### 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.

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

### 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	Sweeping/cleaning of the casting machines area	Clean the area to reduce dust and fugitives	Daily: Once a day at the end of production.

## 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
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> 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.

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



**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.

<b>Section #</b>	<b>Description of Housekeeping Measure</b>	<b>Purpose of Activity</b>	<b>Schedule of Activity</b>

## 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	<input type="checkbox"/> Grinding <input type="checkbox"/> Welding <input checked="" type="checkbox"/> Other: Cutting	S-12 (District Exempt) NESHAP Not Applicable	Main Manufacturing Building - Pipe Run Area	GRINDERS: WELDERS: OTHER: 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A-7	Baghouse	Capture particulate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pressure Drop Monitor. Bags are cleaned when pressure reaches 5.12 inches of water column.
2	<input checked="" type="checkbox"/> Grinding <input type="checkbox"/> Welding <input type="checkbox"/> Other:	S-13 (District Exempt) NESHAP Not Applicable	Main Manufacturing Building - Pipe Run Area	GRINDERS: 1 WELDERS: OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A-8	Baghouse	Capture particulate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	None. Bags are cleaned manually at end of production whenever this baghouse is used.
3	<input checked="" type="checkbox"/> Grinding <input type="checkbox"/> Welding <input type="checkbox"/> Other:	S-14 (District Exempt) NESHAP Not Applicable	Main Manufacturing Building - Pipe Run Area	GRINDERS: 1 WELDERS: OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A-18	Baghouse	Capture particulate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pressure Drop Monitor. Bags are cleaned when pressure reaches 6 inches of water column.
4	<input type="checkbox"/> Grinding <input type="checkbox"/> Welding <input checked="" type="checkbox"/> Other: Cutting	S-30 (District Exempt) NESHAP Not Applicable	Main Manufacturing Building - Pipe Run Area	GRINDERS: WELDERS: OTHER: 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A-8	Baghouse	Capture particulate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	None. Bags are cleaned manually at end of production whenever this baghouse is used.
5	<input type="checkbox"/> Grinding <input type="checkbox"/> Welding <input checked="" type="checkbox"/> Other: Sand Blasting	S-7 NESHAP Not Applicable	Main Manufacturing Building - near Casting Area	GRINDERS: WELDERS: OTHER: 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A-5	Baghouse	Capture particulate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	None. Bags are cleaned continuously during production and hopper is emptied daily at the end of production.
6	<input checked="" type="checkbox"/> Grinding <input type="checkbox"/> Welding <input type="checkbox"/> Other:	FS-59 (District Exempt) NESHAP Not Applicable	TR Flex Building	GRINDERS: 1 WELDERS: OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	FA-22	Dust Collector	Capture particulate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	None. Settling chamber is cleaned once a day at the end of production. Filters are cleaned once a week at the end of production.
7	<input type="checkbox"/> Grinding <input type="checkbox"/> Welding <input checked="" type="checkbox"/> Other: Surface Coating	S-17 (Surface Coater)	Paint and Packaging Area	GRINDERS: WELDERS: OTHER: 1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Grinding <input type="checkbox"/> Welding <input type="checkbox"/> Other:			GRINDERS: WELDERS: OTHER:	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> 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	A-7 Baghouse-Donaldson Model # DFT2-4  Baghouse has no broken bag leak detectors	Baghouse cleaning cycles and filter bag change	Bags are cleaned when pressure reaches 5.12 inches of water column
2	A-8 Baghouse- Model LMC FSD-258  Baghouse has no broken bag leak detectors	Baghouse cleaning cycles and filter bag change	Bags are cleaned manually at end of the day when baghouse is used.
3	A-18 Baghouse-Torit Downflo Model # DFT2-4  Baghouse has no broken bag leak detectors	Baghouse cleaning cycles and filter bag change	Bags are cleaned when pressure reaches 6 inches of water column.
4	A-8 Baghouse- Model LMC FSD-258  Baghouse has no broken bag leak detectors	Baghouse cleaning cycles and filter bag change	Bags are cleaned manually at end of the day when baghouse is used.
5	A-5 Baghouse- Rees Model #3-700  Baghouse has no broken bag leak detectors	Baghouse cleaning cycles and filter bag change	Bags are cleaned continuously during production and hopper is emptied daily at the end of production.
6	FA-22 Dust Collector-Torit Model #84	Dust collector chamber and filter cleaning	Dust settling chamber is cleaned once a day at the end of production. Filters are

	Baghouse has no broken bag leak detectors		cleaned once a week at the end of production.
7	Not Applicable	Use of a low VOC (less than 1 lb/gal VOC) coating material.	Not Applicable

### 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	Cleaning of the Finishing area that includes the floors of the pipe grinders, pipe cutters and sand blaster.	The area is cleaned to reduce the amount of potential airborne material from the area	Monthly: Once a month.

## 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
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
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				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> 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 operations.

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

**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.

<b>Section #</b>	<b>Description of Housekeeping Measure</b>	<b>Purpose of Activity</b>	<b>Schedule of Activity</b>

## 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	Dross-Not applicable	<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Offsite Recycling <input type="checkbox"/> Offsite Disposal <input type="checkbox"/> Onsite Reprocessing
2	Slag	<p>Cupola slag is a by-product material that comes out on top of the molten iron as it comes out from the Cupola after melting.</p> <p>The Cupola slag is skimmed off from a through by gravity and drops to a conveyor that conveys the slag into the ground outside the Melting building. The Cupola slag conveyor has a water hose that is used to cool the slag and to minimize dust. The cupola slag that accumulates on the ground is then stockpiled and sprinkled with water to further cool the slag and to minimize dust, as required.</p> <p>The desulfurization slag is another by-product material that comes out on top of the molten iron after the molten iron is treated with lime to remove the sulfur.</p> <p>The desulfurization slag is skimmed off from the treating ladle by gravity and drops to an open vessel inside the Melting building where it is cooled with ambient air. No water is used for the desulfurization slag. The vessel is then emptied outside the Melting building to further cool the slag with ambient air prior to its offsite shipment.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Offsite Recycling <input checked="" type="checkbox"/> Offsite Disposal <input type="checkbox"/> 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

### 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	Use of water spray and water sprinkler	To cool the slag and to reduce dust	Daily: Once a day during operation
2	Stock piling of slag material.	To organize slag material into one pile prior to its offsite shipment. This reduces the size of the slag footprints by keeping one pile instead of several piles of materials.	Daily: Once a day during operation
3	Shipping of slag material offsite.	To maintain low inventory of slag material thus reducing the amount of potential airborne material	Daily: Shipping of the slag material daily when truck volume is attained and the material is no longer hot.
4	Use of a metal shed to store desulfurization slag.	To reduce fugitive emission	Daily: Storing of the slag material daily in the shed.

**D. 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	Afterburner-North American 214-8A	A-3	Cupola	S-1	Captures particulates
2	Baghouse-REES Model #3-700	A-5	Mold Sandblast	S-7	Captures particulates
3	Baghouse-Harsell Model	A-7	Abrasive Cut-off Saw	S-12	Captures particulates
4	Baghouse-LMC Model FSD-258	A-8	Bevel and O.D. Grinder	S-13 & S-30	Captures particulates
5	Baghouse-Harsell Model	A-10	Ductile Treating	S-4	Captures particulates
6	Baghouse-GMD Model #289-14=6WI	A-13	Cupola	S-1	Captures particulates
7	Baghouse-Torit Downflo Model #DFT2-4	A-18	O.D. Grinder	S-14	Captures particulates
8	Baghouse-Saunco Model #S10-108-1449	A-20	Bell Blow Out Dust Collector	S-8	Captures particulates
9	Dust Collector-Torit Model #84	FA_22	TRF O.D. Grinder Dust Collector	FS-50	Captures particulates



# Technical Data

## 12-13-403.1

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- 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. Label the attachment with the corresponding Attachment #.

### **Attachment # 2**

- 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. Label the attachment with the corresponding Attachment #.

### **Attachment # 3**

# Five-Year Review of the EMP: Schedule for Implementation of the EMP Elements and Fugitive Emissions Reductions

## 12-13-410

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- A. Provide a list of existing or current EMP elements in place during the 5-year review period (March 1, 2016 – February 28, 2021). Include a list of equipment, processes and procedures installed or implemented to reduce fugitive emissions and indicate the permit status if applicable. Specify the purpose for implementation and detail any employee training that was conducted. Any associated training materials shall be made available for Air District review upon request.
  
- 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. 12-13-410 SCHEDULE FOR IMPLEMENTATION OF THE EMP ELEMENTS AND FUGITIVE EMISSIONS REDUCTIONS REALIZED WITHIN THE LAST 5 YEARS (MARCH 1, 2016 – FEBRUARY 28, 2021)**

Section #	Identify Type of Operation per Section 12-13-402	Description of Equipment, Processes or Procedures Implemented Between March 1, 2016 and February 28, 2021	Permit Status	Application # (if applicable):	Implementation Date	Purpose of Implementation	Description of Employee Training
1	Mold and Core Making Operations	Investigated the availability, efficiency and cost of alternative odor free core sand binders rather than installing an enclosure and abatement.	<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input checked="" type="checkbox"/> N/A	Application # (if applicable):	January 2018	To investigate the availability, efficiency and cost of alternative odor free core sand binders rather than installing an enclosure and abatement.  Annual VOC emissions from the core making process is estimated to be less than 1/2 ton per year. Core making is accomplished by heating resin coated sand in a core box. Finished cores are removed by hand and placed on a conveyor. Operators working the machines need to have clear line of sight and full access to the core machines, therefore enclosure would be challenging. We do not have a cost estimate for installing new enclosure, capture and control equipment. However, we believe installing new fugitive emissions capture and control equipment for core making operations is not reasonable for the minimal emissions reductions that would be realized.	
2	Furnace Operations	Installed a broken bag leak detector in the Cupola baghouse outlet duct work.	<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input checked="" type="checkbox"/> N/A	Application # (if applicable):	Oct. 2016	To alert operations if emissions are coming from the stack due to a broken bag.	
3	Metal Management	Installed a new metal shed / enclosure with adequate equipment and personel access in the slag storage area. Evaluate if the shed / enclosure actually reduces fugitive emissions without causing production or personel safety issues.	<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input checked="" type="checkbox"/> N/A	Application # (if applicable):	Dec 2019	To reduce fugitive dust.	

4	Metal Management	Paved selected unpaved areas such as the Shipping yard; area between baghouse and lime slag shed. (See Attachment 4, Diagram of Paving Projects)	<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input checked="" type="checkbox"/> N/A	Application # (if applicable):	June 2016-Nov 2020	To reduce fugitive dust.	
5	Finishing Operations	Replaced broken glass windows in the Main manufacturing buildings including the Pipe Run area.	<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input checked="" type="checkbox"/> N/A	Application # (if applicable):	July 2016  Nov 2020	To contain fugitive emission inside buildings	
6	Finishing Operation	Retired/scrapped old off-road vehicles in the plant. (See Attachment 5, List of Foundry Vehicle Engines)	<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input type="checkbox"/> N/A	Application # (if applicable):	Nov 2016	To reduce emission from exhaust of vehicles	
7	Mold and Core Making Operations	Used of a custom resin coated sand.	<input checked="" type="checkbox"/> A/C <input type="checkbox"/> P/O <input checked="" type="checkbox"/> N/A	Application # (if applicable):	Nov 2018	To reduce odor and to increase strength of the core sand material.	
8	Others	Considered including asphalt coating operations in the EMP. US Pipe has continued using a low-VOC content pipe coating at the Union City Foundry.	<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input checked="" type="checkbox"/> N/A	Application # (if applicable):	January 2016	To reduce VOC emissions.	
			<input type="checkbox"/> A/C <input type="checkbox"/> P/O <input type="checkbox"/> N/A	Application # (if applicable):			

<b>B. 12-13-410 NEW OR FUTURE EMP ELEMENTS TO BE IMPLEMENTED</b>					
<b>Section #</b>	<b>Identify Type of Operation per Section 12-13-402</b>	<b>List Specific Elements to be Implemented Following APCO Approval of the Updated EMP</b>	<b>Projected Implementation Date</b>	<b>Description of Elements to be Implemented</b>	<b>Purpose of Implementation</b>
1	402.2 Metal Management	Replace old concrete pavement in the yard (See Attachment 4, Diagram of Paving Projects).	January 2022	Road paving projects in different areas of the Plant that will be spread over a period of time contingent on market condition.	To reduce fugive dust coming from the crevices of the old pavement.
2	402.7 Finishing Operations	Retire old off road vehicles used in the yard (See Attachment 5, List of Foundry Vehicle Engines)	December 2021	Old (Tier 0 or 1) forklifts and other off-road vehicles will be retired; they have higher emission factors compared to newer (Tier 2, 3 or 4) vehicles.	To reduce fugitive dust coming from old forklifts and other off-road vehicles.
3	402.2 Metal Management	Install water spray/misting sytem on top of coke conveyor	June 2022	A low-pressure water spray/misting sytem will be installed on top of coke conveyor.	To reduce fugitive dust.
4	402.9 Dross and Slag Management	Investigate methods to improve handling of lime slag.	December 2023	Methods to improve handling of lime slag inside and outside the building will be investigated.	To reduce odor and fugitive dust.
5	402.5 Casting and Cooling Operation	Investigate the possibility of improving the capture effeciency of the A-20 Bell-blowout baghouse.	June 2022	The A-20 Bell-blowout baghouse inside the Main building will be evaluated on how to improve its capture effeciency. Step 1.) Bring in Design Engineering Contractors for Review Q1 2022; 2.) US Pipe Engineering to review Design options and select one Q2 2022; Step 3.) US Pipe write Capital Project Justification and gain Funding from Executives Q3 2022; Step 4 Start new equipment install Q4 2022. Step 5.) Complete install and operate Q1 2023.	To improve capture efficiency. Oven Charger Bell Blowout Station Improvements
6	Plant Wide Dust	Use a land applied dust suppressant.	Summer/ Fall 2022	Applying dust suppressant to dirt roads.	To reduce fugative dust.
7	Plant Wide Dust	Rocker panel/rumble strip maintenance.	Summer/ Fall 2022	Perform monthly maintenance and cleaning on rumble stirps and rocker panels.	Reduce fugitive dust and dust tracking on to paved surfaces.
8	Plant Wide Dust	Add a truck tarping station.	Winter/ Spring 2023	Construct a truck tarping station.	To reduce fugative dust generated from truckloads coming from the plant.
9	Plant Wide Dust	Addtional Paving.	Winter/ Spring 2023	Additional paving will be completed as part of the truck tarping station (as mentioned in Section 8).	To reduce fugitive dust.

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

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 #	(AIR DISTRICT 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	(AIR DISTRICT USE ONLY) Approval of Response
1	Identify and implement additional dust control strategies to further minimize fugitive emissions at the material handling and sorting locations.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NA	1. Land applied dust suppressent. 2. Perform monthly rumble strip/ rocker panel maintenance to decrease dust tracking. 3. Add truck tarping station to reduce dust from trucks hauling and delivering to the foundry.	Summer/Fall of 2022	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2	Implement daily schedule for street wet sweeping onsite and use of water truck for dust control.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NA	1. Wet sweep twice per week. 2. Run water truck daily (on dirt roads only).	Summer of 2022	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Enclose, capture, and abate emissions from the mold/core making operation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	US Pipe’s core machines do not use amine gasses like other processes in the Bay Area. Cores are made of environmentally friendly resin coated sand (identified in the EMP) that do not require gas flooding of any kind. Core room dust is kept to a minimum by the use of resin coated sand. Odors are minimal, not detectible outside of the core room.  Also for reference only, if a new capture system was installed, adding electric motors would increase GHG emissions for equipment that is not needed.	NA	NA	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4	Enclose the area where cupola slag and desulfurization slag are stored to minimize fugitive emissions.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Yes- Desulfurization slag is currently kept under roof during production and storage for haul off. This structure was constructed in 2019 for this specific purpose. This material is very hot when it is produced and placing it in a totally enclosed structure is not feasible; air exchange is needed to cool this material over the course of several days. Cupola slag itself is not a source of dust. Cupola slag is a hard, glassy material; little to no dust is generated in this process. However, US Pipe will be adding a conveyor to minimize soil/ dust disruption that is a result of moving slag out of the slag collection area. This will be consturcted and installed by the spring of 2024.	Current/ Spring of 2024.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5	Pave dirt roads/areas that are used by heavy duty vehicles or equipment to move or transport material.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NA	Additional paving will be completed as part of the truck tarping station (mentioned in Section 1). Additional areas in the material handling will be paved.	Winter/ Spring of 2023.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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# Appendix

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Insert any attachments and supplemental information within the corresponding sections of the EMP or at the end of this document. Label each attachment with the corresponding Attachment #.

In the table below, list each Attachment # and provide the Page # and Section # (if applicable) of the EMP where the material is referenced.

<b>Attachment #</b>	<b>Reference to Page # and Section # of EMP</b>
1	Page #8, Section # 12-13-403.1.3 A
	Page            Section #
	Page            Section #
	Page            Section #
	Page            Section #
	Page #            , Section #
	Page #            , Section #
	Page #            , Section #
	Page #            , Section #
	Page #            , Section #
	Page #            , Section #
	Page #            , Section #



ATTACHMENT #1  
 A. COMPANY ORGANIZATIONAL CHART  
 UNITED STATES PIPE & FOUNDRY COMPANY, LLC

