OhioEPA

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

12/19/2014

Certified Mail

Yes	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Renee Olney
Liberty Casting Co
550 Liberty Rd
Delaware, OH 43015

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0121010003
Permit Number: P0117801
Permit Type: Initial Installation
County: Delaware

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Delaware Gazette. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778.

Sincerely,

Erica R. Engel-Ishida, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 -*Via E-Mail Notification*
Ohio EPA-CDO

Permit Strategy Write-Up

1. Check all that apply:

   _X_ Synthetic Minor Determination

   Netting Determination

2. Source Description:

   P096 – Sand handling and cooling for both HSP and FBO lines. The system receives both new and premixed sand from pneumatic trucks. The premix sand is added at a rate of 1.5% and contains 20% sea coal by weight.

   P097 – New sand bin, foundry sand bin, and sand mullor. Sand is pneumatically fed into the system and emissions are directed to a bin mounted vent that goes to sand baghouse.

   P098 – Premix additive (bond) bin. Sand is pneumatically fed into the system and emissions are directed to a 500 cfm bin mounted vent to prevent potential contamination with bonded material.

   P101 – Core wash and release operations. Maximum wash material (Refcotec1768) is employed at 0.7 gal/hr and contains 3.94 lbs VOC/gal. Maximum core release material (Zip Slip LP) is employed at 0.03 gals/hr and contains 5.48 lbs VOC/gal.

   P103 – (4) transfer ladles with a transfer rate of 5 tons/hr per ladle, and a combined natural gas usage of 5.2 MMbtu/hr.

   P107 – Cutting and grinding operations. Cut off saw, (8) stationary snag grinders, (3) 48” hand held bench grinders, (3) 36” hand held bench grinders. The maximum hourly finishing rate for all operations is 2.5 tons/hr and the processes vent to the C&F collector.

   P108 – (2) natural gas fired annealing ovens with a combined heat input rate of 4.6 MMbtu/hr and process rate of 0.4 tons casting/hr.

   P088 – Incoluation A, serving A furnaces. Metal is tapped into a transfer ladle with inoculants present when ductile is scheduled for production. Inoculation has a transfer rate of 5 tons/hr and has a hood positioned over ladle.

   P089 – Incoluation B, serving B furnaces. Metal is tapped into a transfer ladle with inoculants present when ductile is scheduled for production. Inoculation has a transfer rate of 5 tons/hr and has a hood positioned over ladle.

   P090 – FBO mold line that employs green (clay bonded) sand, (1) 45 ton/hr mixer (serves both P090 and P093), and mold release material.

   P091 – FBO pouring and cooling line with a 5 ton/hr capacity, and capture hood.

   P094 – HSP pouring and cooling line with a 5 ton/hr capacity, and capture hood.

P092 – FBO shakeout and desprue lines equipped with a capture hood.

P093 – HSP mold line that employs green (clay bonded) sand, (1) 45 ton/hr mixer (serves both P090 and P093), and mold release material.

P095 – HSP shakeout and desprue lines equipped with capture hood.

P099 – Betaset core making with (3) core making machines, and a maximum sand throughput of 1.8 tons/hr and annual 2 part binder system usage rate of 189 tpy.

P100 – Phenolic Urethane Nobake (PUNB) Palmer Core mixer. Maximum sand throughput is 0.5 tons/hr and annual binder usage of 53 tpy.

P104 - #1 14 ft3 tumbleblast (wheelabrator) with a design capacity of 2 tons metal casting/hr.

P105 - #2 14 ft3 tumbleblast with a design capacity of 2 tons metal casting/hr.

P106 – 28 ft3 tumbleblast (wheelabrator) with a design capacity of 4 tons metal casting/hr.

3. Facility Emissions and Attainment Status:

Liberty Casting is a grey iron foundry located in Delaware County. The facility is a major source for particulates, VOC, and HAP(s) emissions. Delaware County is currently in non-attainment with the 2008, 8-hour ozone standard.

4. Source Emissions:

Givens P104, P105, P106			
Throughput	8 tons of metal cleaned/hr		
baghouse control efficiency	98.5%	0.015	C&F Collector

Calculations using SCC 30400340 WebFIRE, unless otherwise noted		
PM ~ 17 lb PM/ton metal		
Uncontrolled (lb/hr)	(8 tons metal/hr) * (17 lb PM/ton metal) =	1.36E+02
Controlled (lb/hr)	(136 lb/hr) * (0.015) =	2.04E+00
Uncontrolled (tpy)	(136 lb PM/hr) * (5000 hrs/yr) * (ton/2000 lbs)	3.40E+02
Controlled (tpy)	(340 tpy) * (0.015) =	5.10E+00
PM10 ~ 1.7 lb PM10/ton metal		
Uncontrolled (lb/hr)	(8 tons metal/hr) * (1.7 lb PM10/ton metal) =	1.36E+01
Controlled (lb/hr)	(13.6 lb/hr) * (0.015) =	2.04E-01
Uncontrolled (tpy)	(13.6 lb/hr) * (5000 hrs/yr) * (ton/2000 lbs)	3.40E+01
Controlled (tpy)	(34 tpy) * (0.015) =	5.10E-01

	Emissions from P104, P105, P106	
	PM	**PM10**
Uncontrolled (lb/hr)	1.36E+02	1.36E+01
Controlled (lb/hr)	2.04E+00	2.04E-01
Uncontrolled (tpy)	3.40E+02	3.40E+01
Controlled (tpy)	5.10E+00	5.10E-01

Givens for P088, P089			
Throughput	5 tons metal innoculated/hour		
baghouse control efficiency	99%	0.01	Sand Baghouse

Calculations using SCC 30400310 WebFIRE, unless otherwise noted		
PM ~ 4.0 lb PM/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (4.0 lb PM/ton metal) =	2.0E+01
Controlled (lb/hr)	(20 lb/hr) * (0.01) =	2.0E-01
Uncontrolled (tpy)	(4.0 lb PM/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	5.00E+01
Controlled (tpy)	(50 tpy) * (0.001) =	5.00E-01
PM10 ~ 3.2 lb PM10/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (3.2 lb PM10/ton metal) =	1.60E+01
Controlled (lb/hr)	(16 lb/hr) * (0.01) =	1.60E-01
Uncontrolled (tpy)	(3.2 PM10/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	4.00E+01
Controlled (tpy)	(40 tpy) * (0.01) =	4.00E-01
VOC ~ 0.005 lb VOC/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (0.005 lb VOC/ton metal) =	2.50E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(0.005 lb VOC/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	6.30E-02
Controlled (tpy)		

	Emissions from P088, P089		
	PM	**PM10**	**VOC**
Uncontrolled (lb/hr)	2.25E+00	1.60E+01	2.50E-02
Controlled (lb/hr)	2.25E-02	1.60E-01	0.00E+00
Uncontrolled (tpy)	5.00E+01	4.00E+01	6.30E-02
Controlled (tpy)	5.00E-01	4.00E-01	0.00E+00

Permit Strategy Write-Up
Liberty Casting Co
Permit Number: P0117801
Facility ID: 0121010003

P101 (Givens from PTI Application submitted 11/11/14)		
Core wash throughput	0.7 gal/hr , 1700 gal/yr	VOC content - 3.94 lb/gal
Core wash light-off efficiency	70%	
Core release material throughput	0.03 gal/hr , 80 gal/yr	VOC content - 5.48 lb/gal

Core Wash Operation		
Uncontrolled (lb/hr)	(0.7 gal/hr) * (3.94 lb VOC/gal)	2.76E+00
Controlled (lb/hr)	(0.7 gal/hr) * (3.94 lb VOC/gal) * (1-0.7)	8.27E-01
Uncontrolled (tpy)	(2.76 lb VOC/hr) * (8760 hrs/hr) * (ton/2000)	1.21E+01
Controlled (tpy)	(3.94 lb VOC/gal) * (1700 gal/yr) * (1-0.7) * (ton/2000)	1.00E+00

Core Release Operation		
Uncontrolled (lb/hr)	(0.03 gal/hr) * (5.48 lb VOC/gal)	1.64E-01
Controlled (lb/hr)		
Uncontrolled (tpy)	(0.164 lb VOC/hr) * (8760 hrs/yr) * (ton/2000)	7.18E-01
Controlled (tpy)	(80 gal/yr) * (5.48 lb VOC/gal) * (ton/2000)	2.19E-01

	Emissions from P101
	VOC
Uncontrolled (lb/hr)	2.92
Controlled (lb/hr)	8.27E-01
Uncontrolled (tpy)	12.81
Controlled (tpy)	1.22E+00

Givens for P090, P093		
Throughput	5 tons metal melted/hr	25,000 tpy

Emissions factors from Ohio EPA RACM Guide, Table 2.7-1		
PM ~ 0.04 lb PM/ton metal		
Uncontrolled (lb/hr)		
Controlled (lb/hr)	(5 tons metal melted/hr) * (0.04 lb PM/ton metal)	2.00E-01

Uncontrolled (tpy)		
Controlled (tpy)	(0.04 lb PM/hr) * (25,000 ton metal melted/yr) * (ton/2000 lbs)	5.00E-01
PM10 ~ 0.034 lb PM10/ton metal		
Uncontrolled (lb/hr)		
Controlled (lb/hr)	(5 tons metal melted/hr) * (0.034 lb PM10/ton metal)	1.70E-01
Uncontrolled (tpy)		
Controlled (tpy)	(0.034 lb PM10/hr) * (25,000 tons metal melted/yr) * (ton/2000)	4.30E-01
PM2.5 ~ 0.012 lb PM10/ton metal		
Uncontrolled (lb/hr)		
Controlled (lb/hr)	(5 tons metal melted/yr) * (0.012 lb PM2.5/ton metal)	6.00E-02
Uncontrolled (tpy)		
Controlled (tpy)	(0.012 lb PM2.5) * (25,000 tons metal melted/yr) * (ton/2000)	1.50E-01

	Emissions from P090, P093		
	PM	**PM10**	**PM2.5**
Uncontrolled (lb/hr)	0.00E+00	0.00E+00	0.00E+00
Controlled (lb/hr)	2.00E-01	1.70E-01	6.00E-02
Uncontrolled (tpy)	0.00E+00	0.00E+00	0.00E+00
Controlled (tpy)	5.00E-01	4.30E-01	1.50E-01

Givens for P091, P094			
Throughput	5 tons/hr and 25,000 tons metal melted/yr		
baghouse control efficiency	99%	0.01	Sand Baghouse

FBO Pouring Calculations using SCC 30400318 WebFIRE, unless otherwise noted		
PM ~ 4.2 lb PM/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (4.2 lb PM/ton metal) =	2.10E+01
Controlled (lb/hr)	(21 lb/hr) * (0.01) =	2.10E-01
Uncontrolled (tpy)	(4.2 lbs PM/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	5.25E+01
Controlled (tpy)	(52.50 tpy) * (0.01) =	5.25E-01
PM10 ~ 2.06 lb PM10/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (2.06 lb PM10/ton metal) =	1.03E+01
Controlled (lb/hr)	(10.3 lb/hr) * (0.01) =	1.03E-01
Uncontrolled (tpy)	(2.06 lbs PM10/ton metal) * (25,000 tons metal melted/yr) * (ton/2000	2.58E+01

	lbs) =	
Controlled (tpy)	(25.75 tpy) * (0.01) =	2.58E-01
PM2.5 ~ 1.00 lb PM2.5/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (1.00 lb PM2.5/ton metal) =	5.00E+00
Controlled (lb/hr)	(5 lb/hr) * (0.01) =	5.00E-02
Uncontrolled (tpy)	(1.00 lbs PM2.5/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	1.25E+01
Controlled (tpy)	(12.5 tpy) * (0.01) =	1.25E-01
SOx ~ 0.02 lb SOx/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (0.02 lb SOx/ton metal) =	1.00E-01
Controlled (lb/hr)		0.00E+00
Uncontrolled (tpy)	(0.02 lb SOx/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	2.50E-01
Controlled (tpy)		0.00E+00
NOX ~ 0.01 lb NOX/ton metal		
Uncontrolled (lb/hr)	(5 tons metal melted/hr) * (0.01 lb NOX/ton metal) =	5.00E-02
Controlled (lb/hr)		0.00E+00
Uncontrolled (tpy)	(0.01 lb NOX/ton metal) * (25,000 tons metal melted/year) * (ton/2000 lbs) =	1.25E-01
Controlled (tpy)		0.00E+00
VOC ~ 0.14 lb VOC/ton metal		
Uncontrolled (lb/hr)	(5 tons metal melted/hr) * (0.14 lb VOC/ton metal) =	7.00E-01
Controlled (lb/hr)		0.00E+00
Uncontrolled (tpy)	(0.14 lb VOC/ton metal) * (25,000 tons metal melted/year) * (ton/2000 lbs) =	1.75E+00
Controlled (tpy)		0.00E+00
HAPs ~ 0.416 lb HAPs/ton metal Table 2, AFS Foundry Emission Factors for Preliminary Screening (Technickon 1412-317)		
Uncontrolled (lb/hr)	(5 tons metal melted/hr) * (0.416 lb HAP/ton metal) =	2.08E+00
Controlled (lb/hr)		0.00E+00
Uncontrolled (tpy)	(0.416 lb HAP/ton metal) * (25,000 tons metal melted/year) * (ton/2000 lbs) =	5.20E+00
Controlled (tpy)		0.00E+00

FBO Cooling Calculations using SCC 30400320 WebFIRE, unless otherwise noted		
PM ~ 4.2 lb PM/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (4.2 lb PM/ton metal) =	2.10E+01
Controlled (lb/hr)	(21 lb/hr) * (0.01) =	2.10E-01
Uncontrolled (tpy)	(4.2 lbs PM/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs)	5.25E+01

	=	
Controlled (tpy)	(52.50 tpy) * (0.01) =	5.25E-01
PM10 ~ 2.06 lb PM10/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (2.06 lb PM10/ton metal) =	1.03E+01
Controlled (lb/hr)	(10.3 lb/hr) * (0.01) =	1.03E-01
Uncontrolled (tpy)	(2.06 lbs PM10/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	2.58E+01
Controlled (tpy)	(25.75 tpy) * (0.01) =	2.58E-01
PM2.5 ~ 1.00 lb PM2.5/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (1.00 lb PM2.5/ton metal) =	5.00E+00
Controlled (lb/hr)	(5.00 lb/hr) * (0.01) =	5.00E-02
Uncontrolled (tpy)	(1.00 lbs PM2.5/ton metal) * (25,000 tons metal melted/yr) * (ton/2000 lbs) =	1.25E+01
Controlled (tpy)	(12.5 tpy) * (0.01) =	1.25E-01
HAPs ~ 0.416 lb HAPs/ton metal Table 2, AFS Foundry Emission Factors for Preliminary Screening (Technickon 1412-317)		
Uncontrolled (lb/hr)	(5 tons metal melted/hr) * (0.416 lb HAP/ton metal) =	2.08E+00
Controlled (lb/hr)		0.00E+00
Uncontrolled (tpy)	(0.416 lb HAP/ton metal) * (25,000 tons metal melted/year) * (ton/2000 lbs) =	5.20E+00
Controlled (tpy)		0.00E+00

	Emissions from FBO and HSP Pouring						
	PM	**PM10**	**PM2.5**	**SOX**	**NOX**	**VOC**	**HAPs**
Uncontrolled (lb/hr)	4.20E+01	2.06E+01	1.00E+01	1.00E-01	5.00E-02	7.00E-01	2.08E+00
Controlled (lb/hr)	4.20E-01	2.06E-01	1.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Uncontrolled (tpy)	1.05E+02	5.15E+01	2.50E+01	2.50E-01	1.25E-01	1.75E+00	5.20E+00
Controlled (tpy)	1.05E+00	5.15E-01	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00

** HAPs emissions include emissions from all cooling, pouring, and shakeout operations associated with project.*

Givens for P092, P095			
Throughput	5 tons/hr and 25,000 tons metal melted/yr		
baghouse control efficiency	99%	0.01	Sand Baghouse

FBO Shakeout Calculations using SCC 30400331 WebFIRE, unless otherwise noted		
PM ~ 3.2 lb PM/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (3.2 lb PM/ton metal) =	1.60E+01
Controlled (lb/hr)	(16 lb/hr) * (0.01) =	1.60E-01
Uncontrolled (tpy)	(3.2 lb/ton metal) * (25,000 ton metal/yr) * (ton/2000 lbs) =	4.00E+01
Controlled (tpy)	(40 tpy) * (0.01) =	4.00E-01
PM10 ~ 2.24 lb PM10/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (2.24 lb PM10/ton metal) =	1.12E+01
Controlled (lb/hr)	(11.2 lb/hr) * (0.01) =	1.12E-01
Uncontrolled (tpy)	(2.24 lb/ton metal) * (25,000 ton metal/yr) * (ton/2000 lbs) =	2.80E+01
Controlled (tpy)	(28 tpy) * (0.01) =	2.80E-01
PM2.5 ~ 1.34 lb PM2.5/ton metal		
Uncontrolled (lb/hr)	(5 tons metal/hr) * (1.34 lb PM2.5/ton metal) =	6.70E+00
Controlled (lb/hr)	(6.7 lb/hr) * (0.01) =	6.70E-02
Uncontrolled (tpy)	(1.34 lb/ton metal) * (25,000 ton metal/yr) * (ton/2000 lbs) =	1.68E+01
Controlled (tpy)	(16.75 tpy) * (0.01) =	1.68E-01
VOC ~ 1.2 lb VOC/ton metal		
Uncontrolled (lb/hr)	(5 tons metal melted/hr) * (1.2 lb VOC/ton metal) =	6.00E+00
Controlled (lb/hr)		0.00E+00
Uncontrolled (tpy)	(1.2 lb/ton metal) * (25,000 ton metal/yr) * (ton/2000 lbs) =	1.50E+01
Controlled (tpy)		0.00E+00
HAPs ~ 0.416 lb HAPs/ton metal Table 2, AFS Foundry Emission Factors for Preliminary Screening (Technickon 1412-317)		
Uncontrolled (lb/hr)	(5 tons metal melted/hr) * (0.416 lb HAP/ton metal) =	2.08E+00
Controlled (lb/hr)		0.00E+00
Uncontrolled (tpy)	(0.416 lb HAP/ton metal) * (25,000 tons metal melted/year) * (ton/2000 lbs) =	5.20E+00
Controlled (tpy)		0.00E+00

	Emissions from P092, P095				
	PM	**PM10**	**PM2.5**	**VOC**	**HAPs**
Uncontrolled (lb/hr)	1.60E+01	1.12E+01	6.70E+00	6.00E+00	2.08E+00
Controlled (lb/hr)	1.60E-01	1.12E-01	6.70E-02	0.00E+00	0.00E+00
Uncontrolled (tpy)	4.00E+01	2.80E+01	1.68E+01	1.50E+01	5.20E+00
Controlled (tpy)	4.00E-01	2.80E-01	1.68E-01	0.00E+00	0.00E+00

Givens for P096			
Throughput	45 tons sand/hr; 270,000 tons sand/yr		
baghouse control efficiency	99%	0.01	Sand Baghouse

Calculations using SCC 30400350 WebFIRE, unless otherwise noted		
PM ~ 3.6 lbs/ton sand		
Uncontrolled (lb/hr)	(45 tons sand/hr) * (3.6 lbs/ton metal) =	1.62E+02
Controlled (lb/hr)	(162 lbs/hr) * (0.01) =	1.62E+00
Uncontrolled (tpy)	(3.6 lbs/ton sand) * (270,000 tons sand/yr) * (ton/2000) =	4.86E+02
Controlled (tpy)	(486 tpy) * (0.01) =	4.86E+00
PM 10 ~ 3.06 lbs/ton sand, EPA's PM calculator		
Uncontrolled (lb/hr)	(45 tons sand/hr) * (3.06 lbs/ton sand) =	1.38E+02
Controlled (lb/hr)	(138 lbs/hr) * (0.01) =	1.38E+00
Uncontrolled (tpy)	(3.06 lbs/ton sand) * (270,000 tons sand/yr) * (ton/2000) =	4.13E+02
Controlled (tpy)	(413 tpy) * (0.01) =	4.13E+00

	Emissions for P096	
	PM	**PM10**
Uncontrolled (lb/hr)	1.62E+02	1.38E+02
Controlled (lb/hr)	1.62E+00	1.38E+00
Uncontrolled (tpy)	4.86E+02	4.13E+02
Controlled (tpy)	4.86E+00	4.13E+00

Givens for P097, P098			
Throughput	45 tons sand/hr; 270,000 tons sand/yr	new sand bin, foundry sand bin, sand mullor, additive bin	
baghouse control efficiency	99%	0.01	Sand Baghouse

Permit Strategy Write-Up
Liberty Casting Co
Permit Number: P0117801
Facility ID: 0121010003

Calculations using SCC 30400350 WebFIRE, unless otherwise noted		
PM ~ 3.6 lbs/ton sand		
Uncontrolled (lb/hr)	(45 tons sand/hr) * (3.6 lbs/ton metal) =	1.62E+02
Controlled (lb/hr)	(162 lbs/hr) * (0.01) =	1.62E+00
Uncontrolled (tpy)	(3.6 lbs/ton sand) * (270,000 tons sand/yr) * (ton/2000) =	4.86E+02
Controlled (tpy)	(486 tpy) * (0.01) =	4.86E+00
PM 10 ~ 3.06 lbs/ton sand, EPA's PM calculator		
Uncontrolled (lb/hr)	(45 tons sand/hr) * (3.06 lbs/ton sand) =	1.38E+02
Controlled (lb/hr)	(138 lbs/hr) * (0.01) =	1.38E+00
Uncontrolled (tpy)	(3.06 lbs/ton sand) * (270,000 tons sand/yr) * (ton/2000) =	4.13E+02
Controlled (tpy)	(413 tpy) * (0.01) =	4.13E+00

	Emissions for P097, P098	
	PM	**PM10**
Uncontrolled (lb/hr)	1.62E+02	1.38E+02
Controlled (lb/hr)	1.62E+00	1.38E+00
Uncontrolled (tpy)	4.86E+02	4.13E+02
Controlled (tpy)	4.86E+00	4.13E+00

Givens for P100		
PEP SET Q I usage	(0.012 ton binder/hr) * (55%) = 0.007 ton/hr; (58.50 ton binder/yr) * (55%) = 32.18 tpy	PTI application A0052199
PEP SET Q II usage	(0.012 ton binder/hr) * (45%) = 0.005 ton/hr; (58.50 ton binder/yr) * (45%) = 26.33 tpy	PTI application A0052199
PEP SET Q catalyst usage	(0.012 ton binder/hr) * (10%) = 0.001 ton/hr; (58.50 ton binder/yr) * (10%) = 5.85 tpy	PTI application A0052199
VOC EF	lb VOC/ton binder = (EF) * (binder ration) * (2000 lb/ton) * (0.0634 lb/lb binder) * (1:1.3) * (2000 lb/ton) = 164.84 lb VOC/ton binder	ASK Chemical, "OCMA Report PEP SET QI4180/QII6180/Q600 Catalyst

VOC Emissions		
PEP SET Q I		
(lb/hr)	(164.84 lb VOC/ton binder) * (0.007 ton binder/hr)	1.15E+00
(tpy)	(164.84 lb VOC/ton binder) * (32.18 ton binder/yr) * (ton/2000 lbs)	2.65E+00

PEP SET Q II		
(lb/hr)	(164.84 lb VOC/ton binder) * (0.005 ton binder/hr)	8.20E-01
(tpy)	(164.84 lb VOC/ton binder) * (26.33 ton binder/yr) * (ton/2000 lbs)	2.17E+00
PEP SET Q catalyst		
(lb/hr)	(164.84 lb VOC/ton binder) * (0.001 ton binder/hr)	1.60E-01
(tpy)	(164.84 lb VOC/ton binder) * (5.85 ton binder/yr) * (ton/2000 lbs)	4.80E-01
Naptha Emissions - % weight from MSDS		
PEP SET Q I		
(lb/hr)	(1.15 lb VOC/hr) * (40% Naptha)	4.60E-01
(tpy)	(2.65 tpy) * (40% Naptha)	1.06E+00
HAPs Emissions - % weight from MSDS		
PEP SET Q I		
(lb/hr)	(1.15 lb VOC/hr) * (5% Phenol)	6.00E-02
(tpy)	(2.65 tpy) * (5% Phenol)	1.30E-01
PEP SET Q II		
(lb/hr)	(1.15 lb VOC/hr) * (30% MDI)	3.50E-01
(tpy)	(2.65 tpy) * (30% MDI)	6.50E-01

	Emissions for P100		
	VOC	**Naptha**	**HAPs**
(lb/hr)	2.13	0.46	0.87
(tpy)	5.30E+00	1.06E+00	1.84E+00

Givens for P099		
Throughput	96 tpy resin	62.4 tpy methyl formate catalyst

Calculations based on HAI "Estimation of Emissions from the Beta Set Process," 7/28/14		
Methanol/VOC		
Equation	0.5(0.1R + 0.03MF)	
Givens	R = lbs resin soln/yr ; MF = lbs methly formate/year	
Uncontrolled (tpy)	0.5 * (0.1 (96 tpy) + 0.03 (62.4 tpy)) =	5.74E+00

** 0.03 accounts for 3% loss during storage*

	Emissions for P099	
	Methanol	VOC
Uncontrolled (tpy)	5.74	5.74

Givens for P107			
Throughput	2.5 tons metal/hr	throughput for all grinding and cutting operations	
baghouse control efficiency	98.5%	0.015	C&F baghouse

Calculations using SCC 30400340 WebFIRE, unless otherwise noted		
PM ~ 1.6 lb PM/ton metal		
Uncontrolled (lb/hr)	(2.5 tons metal/hr) * (1.6 lb PM/ton metal) =	4.00E+00
Controlled (lb/hr)	(4 lb/hr) * (0.015) =	6.00E-02
Uncontrolled (tpy)	(4 lb/hr) * (5000 hrs/yr) * (ton/2000)	1.00E+01
Controlled (tpy)	(10 tpy) * (0.015) =	1.50E-01
PM10 ~ 1.6 lb PM10/ton metal		
Uncontrolled (lb/hr)	(2.5 tons metal/hr) * (1.6 lb PM10/ton metal) =	4.00E+00
Controlled (lb/hr)	(4 lb/hr) * (0.015) =	6.00E-02
Uncontrolled (tpy)	(4 lb/hr) * (5000 hrs/yr) * (ton/2000)	1.00E+01
Controlled (tpy)	(10 tpy) * (0.015) =	1.50E-01

	Emissions for P107	
	PM	**PM10**
Uncontrolled (lb/hr)	4.00E+00	4.00E+00
Controlled (lb/hr)	6.00E-02	6.00E-02
Uncontrolled (tpy)	1.00E+01	1.00E+01
Controlled (tpy)	1.50E-01	1.50E-01

Givens for P108		
Throughput	4.60 mmbtu/hr	combined rate for (2) ovens

Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
PM ~ 7.45E0-3 lb/mmbtu		
Uncontrolled (lb/hr)	(4.60 mmbtu/hr) * (7.45E-03 lb PM/mmbtu) =	3.43E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(3.43E-02 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.50E-01
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		

PM10 ~ 5.59E-03 lb/mmbtu		
Uncontrolled (lb/hr)	(4.60 mmbtu/hr) * (5.59E-03 lb PM10/mmbtu) =	2.57E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(2.57E-02 lb/mmbtu) * (8760 hrs/yr) * (ton/2000 lbs) =	1.13E-01
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
PM2.5 ~ 1.86E-03 lb/mmbtu		
Uncontrolled (lb/hr)	(4.60 mmbtu/hr) * (1.86E-03 lb PM2.5/mmbtu) =	8.56E-03
Controlled (lb/hr)		
Uncontrolled (tpy)	(8.56E-03 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	3.75E-02
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
SOX ~ 5.88E-04 lb/mmbtu		
Uncontrolled (lb/hr)	(4.60 mmbtu/hr) * (5.88E-04 lb SOx/mmbtu) =	2.70E-03
Controlled (lb/hr)		
Uncontrolled (tpy)	(2.70E-03 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.18E-02
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
NOX ~ 2.16E0-3 lb/mmbtu		
Uncontrolled (lb/hr)	(4.60 mmbtu/hr) * (2.16E0-3 lb Nox/mmbtu) =	7.80E-01
Controlled (lb/hr)		
Uncontrolled (tpy)	(0.78 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	3.42E+00
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
VOC ~ 5.39E0-3 lb/mmbtu		
Uncontrolled (lb/hr)	(4.60 mmbtu/hr) * (5.39E0-3 lb VOC/mmbtu) =	2.48E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(2.48E-02 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.09E-01
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-1		
CO ~ 0.08 lb/mmbtu		
Uncontrolled (lb/hr)	(4.60 mmbtu/hr) * (0.08 lb CO/mmbtu) =	3.68E-01
Controlled (lb/hr)		
Uncontrolled (tpy)	(3.68E-01 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.61E+00
Controlled (tpy)		

Permit Strategy Write-Up
Liberty Casting Co
Permit Number: P0117801
Facility ID: 0121010003

	Emissions from P108						
	PM	**PM10**	**PM2.5**	**SOx**	**Nox**	**VOC**	**CO**
Uncontrolled (lb/hr)	3.43E-02	2.57E-02	8.56E-03	2.70E-03	7.80E-01	2.48E-02	3.68E-01
Controlled (lb/hr)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Uncontrolled (tpy)	1.50E-01	1.13E-01	3.75E-02	1.18E-02	3.42E+00	1.09E-01	1.61E+00
Controlled (tpy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Givens for P103		
Throughput	5.20 mmbtu/hr	(4) ladle preheaters

Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
PM ~ 7.45E0-3 lb/mmbtu		
Uncontrolled (lb/hr)	(5.20 mmbtu/hr) * (7.45E-03 lb PM/mmbtu) =	3.87E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(3.87E-02 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.70E-01
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
PM10 ~ 5.59E-03 lb/mmbtu		
Uncontrolled (lb/hr)	(5.20 mmbtu/hr) * (5.59E-03 lb PM10/mmbtu) =	2.91E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(2.91E-02 lb/mmbtu) * (8760 hrs/yr) * (ton/2000 lbs) =	1.27E-01
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
PM2.5 ~ 1.86E-03 lb/mmbtu		
Uncontrolled (lb/hr)	(5.20 mmbtu/hr) * (1.86E-03 lb PM2.5/mmbtu) =	9.67E-03
Controlled (lb/hr)		
Uncontrolled (tpy)	(9.67E-03 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	4.24E-02
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
SOX ~ 5.88E-04 lb/mmbtu		
Uncontrolled (lb/hr)	(5.20 mmbtu/hr) * (5.88E-04 lb SOx/mmbtu) =	3.06E-03
Controlled (lb/hr)		
Uncontrolled (tpy)	(3.06E-03 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.34E-02
Controlled (tpy)		

Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
NOX ~ 2.16E0-3 lb/mmbtu		
Uncontrolled (lb/hr)	(5.20 mmbtu/hr) * (2.16E0-3 lb Nox/mmbtu) =	1.12E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(1.12E-02 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	4.91E-02
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2		
VOC ~ 5.39E0-3 lb/mmbtu		
Uncontrolled (lb/hr)	(5.20 mmbtu/hr) * (5.39E0-3 lb VOC/mmbtu) =	2.80E-02
Controlled (lb/hr)		
Uncontrolled (tpy)	(2.80E-02 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.23E-01
Controlled (tpy)		
Calculations using AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-1		
CO ~ 0.08 lb/mmbtu		
Uncontrolled (lb/hr)	(5.20 mmbtu/hr) * (0.08 lb CO/mmbtu) =	4.16E-01
Controlled (lb/hr)		
Uncontrolled (tpy)	(4.16E-01 lb/hr) * (8760 hrs/yr) * (ton/2000 lbs) =	1.82E+00
Controlled (tpy)		

	Emissions from P103						
	PM	**PM10**	**PM2.5**	**SOx**	**Nox**	**VOC**	**CO**
Uncontrolled (lb/hr)	3.87E-02	2.91E-02	9.67E-03	3.06E-03	1.12E-02	2.80E-02	4.16E-01
Controlled (lb/hr)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Uncontrolled (tpy)	1.70E-01	1.27E-01	4.24E-02	1.34E-02	4.91E-02	1.23E-01	1.82E+00
Controlled (tpy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONTROLLED PROJECT EMISSIONS

	TPY										
Emissions Unit	PM	PM10	PM2.5	SOX	NOX	VOC	CO	Methanol	HAPs	Pb	Mn
Electric induction furnace 1A (P083)	2.25E-03	2.15E-03				3.80E-01				2.25E-05	5.63E-05
Electric induction furnace 1B (P084)	2.25E-03	2.15E-03				3.80E-01				2.25E-05	5.63E-05
Electric induction furnace 2A (P085)	2.25E-03	2.15E-03				3.80E-01				2.25E-05	5.63E-05
Electric induction furnace 2B	2.25E	2.15E				3.80E				2.25E	5.63E

(P086)	-03	-03				-01				-05	-05
Scrap handling and charging (P087)	7.50E +00	4.50E +00									
Inoculation 1 (P088)	5.00E -01	4.00E -01				6.30E -02					
Inoculation 2 (P089)	5.00E -03	4.00E -03				6.30E -02					
FBO, HSP Molding (P090, P093) *	5.00E -01	4.30E -01	1.50E -01								
HSP/FBO Shakeout and Despruing (P092, P095)*	4.00E -01	2.80E -01	1.68E -01			1.50E +01			5.20E +00		
HSP/FBO Pouring and Cooling (P094, P091)*	5.25E -01	2.58E -01	6.25E -02	1.25E -01	6.25E -02	8.75E -01			**		
Sand Handling and Cooling (P096)	4.86E +00	4.13E +00									
Sand Bins (P097, P098)*	4.86E +00	4.13E +00									
Beta Cure core making (P099)						5.74E +00		5.74E +00			
PEP SET core making (P100)						5.30E +00			1.84E +00		
Core wash and release operations (P101)						1.22E +00					
Tumbleblasts (P104, P105, P106)	5.10E +00	5.10E -01									
Sawing and grinding (P107)	1.50E -01	1.50E-01									
(2) annealing furnaces (P108)	1.50E -01	1.13E -01	3.75E -02	1.18E -02	3.42E +00	1.09E -01	1.61E +00				
(4) Ladle Preheaters (P103)	1.70E -01	1.10E -01	1.10E -01	1.34E -02	4.91E -02	1.23E -01	1.82E +00				
TOTAL TPY	24.73	15.02	0.53	0.15	3.53	30.02	3.43	5.74	12.78	0.00	0.00

Permit Strategy Write-Up
Liberty Casting Co
Permit Number: P0117801
Facility ID: 0121010003

UNCONTROLLED PROJECT EMISSIONS

	TPY										
Emissions Unit	PM	PM10	PM2.5	SOX	NOX	VOC	CO	Methanol	HAPs	Pb	Mn
Electric induction furnace 1A (P083)	1.13E+01	1.08E+01				3.80E-01				1.13E-01	2.81E-01
Electric induction furnace 1B (P084)	1.13E+01	1.08E+01				3.80E-01				1.13E-01	2.81E-01
Electric induction furnace 2A (P085)	1.13E+01	1.08E+01				3.80E-01				1.13E-01	2.81E-01
Electric induction furnace 2B (P086)	1.13E+01	1.13E+01				3.80E-01				1.13E-01	2.81E-01
Scrap handling and charging (P087)	7.50E+00	4.50E+00									
Inoculation 1 (P088)	5.00E+01	4.00E+01				6.30E-02					
Inoculation 2 (P089)	5.00E+01	4.00E+01				6.30E-02					
FBO Molding (P090, P093) *	5.00E-01	4.30E-01	1.50E-01								
HSP/FBO Shakeout and Despruing (P092, P095)*	4.00E+01	2.80E+01	1.68E+01			1.50E+01			5.20E+00		
HSP/FBO Pouring and Cooling (P094, P091)*	1.05E+02	5.15E+01	2.50E+01	2.50E-01	1.25E-01	1.75E+00			**		
Sand Handling and Cooling (P096)	4.86E+02	4.13E+02									
Sand Bins (P097, P098)*	4.86E+02	4.13E+02									
Beta Cure core making (P099)						5.74E+00		5.74E+00			
Bioset Core Making and Storage (P100)						5.30E+00					
Core wash operations (P101)						1.28E+01			1.84E+00		
Tumbleblasts (P104, P105, P106)	3.40E+02	3.40E+01									
Sawing and grinding (P107)	1.00E+01	1.00E+01									

(2) annealing furnaces (P108)	1.50E-01	1.13E-01	3.75E-02	1.18E-02	3.42E+00	1.09E-01	1.61E+00				
(4) Ladle Preheaters (P103)	1.70E-01	1.27E-01	4.24E-02	1.34E-02	4.91E-02	1.23E-01	1.82E+00				
TOTAL TPY	1620.320	1078.370	41.980	0.275	3.590	42.474	3.434	5.740	12.780	0.450	1.125

*combined limit

**HAPs emissions from pouring, cooling, and shakeout

5. Conclusion:

P096, P097, P098 – Synthetic minor for PM and PM10 to avoid becoming a major PSD source by limiting the annual sand usage. The emissions unit vents to the sand baghouse, which is subject to 99% control efficiency. The sand baghouse is subject to the BLDS requirements and the fugitive VE opacity limit in 40 CFR 63, EEEEE. Stack testing is required for this emissions unit.

P101 – Synthetic minor to avoid non-attainment NSR by limiting VOC content of materials, material usage, and light-off within 1-minute. The EU is subject to the ignition requirements in 40 CFR 63, Subpart EEEEE. This is an uncontrolled source of VOC and air toxics/HAPs are less than 1 tpy.

P103, P108 – The uncontrolled PTE based on natural gas usage for PM, PM10, PM2.5, SOx, NOx, VOC and CO emisisons are less than 10 tpy. The EU is subject to the fugitive VE opacity limit in 40 CFR 63, Subpart EEEEE.

P107, P104, P105, P106 – Synthetic minor for PM and PM10 to avoid becoming a major PSD source by limiting the annual hours of operation. EU vents to C&F collector which is subject to 98.5% control efficiency and is subject to the fugitive VE limit in 40 CFR Part 63, EEEEE. Stack testing is required for this emissions unit. Stack testing is required for this emissions unit.

P090, P093 – BAT is less than 10 tpy taking into account the synthetic minor limitation for 25,000 tons metal melted/yr established by PTI P0116874. The emissions unit is an uncontrolled source and subject to the fugitive VE requirements in 40 CFR 63, Subpart EEEEE.

P099, P100 – Synthetic minor to avoid non-attainment NSR for VOC by limiting resin and catalyst usage. The methanol emissions from the catalyst are subject to the requirements in 40 CFR 63, Subpart EEEEE.

P092, P093 – Synthetic minor to avoid PSD and non-attainment NSR for PM, PM10, PM2.5 and VOC by limiting the annual operating hours. VOC emissions are greater than 10 tpy and subject to the requirements of ORC 3704.03. The emissions unit vents to the sand baghouse, which is subject to 99% control efficiency, the BLDS requirements in 40 CFR 63, EEEEE. The fugitive VEs are subject to the opacity requirement in 40 CFR 63, EEEEE. Stack testing is required for this emissions unit.

P091, P094 - Synthetic minor to avoid PSD and non-attainment NSR for PM, PM10, PM2.5 and VOC by limiting the annual melt rate (established by PTI P0116874). The emissions unit vents to the sand baghouse, which is subject to 99% control efficiency. The sand baghouse is subject to the BLDS requirements and the fugitive VE opacity limit in 40 CFR 63, EEEEE. Stack testing is required for this emissions unit.

The emissions from the project had the potential to trigger non-attainment NSR for VOC and make the facility major for PSD for PM2.5 and Pm10 in future projects. By establishing synthetic minor limitations that limit material usage, VOC content, and annual operating hours the project will not trigger the 40 tpy threshold for non-attainment NSR. Also, synthetic minor requirements to require particulate sources to vent to baghouses ensures the facility will not become a major PSD source. The facility is currently not a major source of PM10 and PM2.5, and the federally enforceable restrictions proposed for this project will keep them from becoming a major PSD source. This project also triggered 40 CFR 63, Subpart EEEEE applicability based on the facility-wide HAPs emissions from the current foundry processes. The requirements of this rule have incorporated into the PTI on emissions unit by emissions unit basis. The CO2 emissions from this project will not trigger PSD for GHGs.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

Pollutant	Tons Per Year
PM	17.84
PM10	10.84
PM2.5	0.48
SOx	0.28
NOx	7.42
VOC	30.92
CO	1.03
Methanol	5.74
HAPs	12.78

Delaware County

PUBLIC NOTICE – PUBLIC HEARING
OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF DRAFT AIR POLLUTION PERMIT-TO-INSTALL
LIBERTY CASTING CO

Notice is hereby given that on December 19, 2014, the Ohio Environmental Protection Agency (Ohio EPA), 50 West Town Street, Columbus, Ohio, Division of Air Pollution Control issued a draft Permit-to-Install (permit number P0117801) to Liberty Casting Company, 550 Liberty Road, Delaware, Ohio 43015.

This draft permit proposes to allow the installation of two inoculation stations, two mold making lines, core wash line, two pouring and cooling lines, sawing and grinding operations, three tumbleblasts, four ladle preheaters, and two annealing ovens. The proposed emissions units will serve various operations for the production of gray iron.

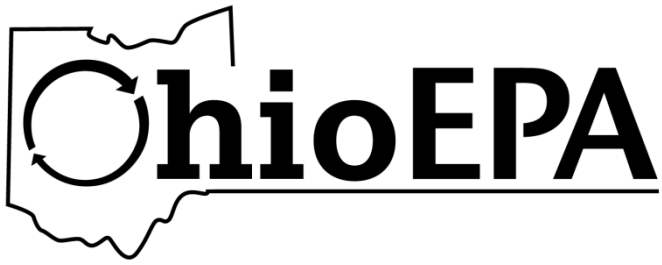
Comment Period and Public Hearing:

Ohio EPA is providing an opportunity for the public to comment on the permit.A public information session and hearing will be held at 6:00 p.m. on Monday, January 26, 2015 at Frank B. Willis Government Building, 2079 U.S. Route 23 North, Delaware, Ohio 43015.

The public information session will commence at 6:00 p.m. and the hearing will follow immediately to accept comments on the draft permit. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

Comments received shall be considered by the director before a final issuance of the permit. To be part of the official record, all comments must be received at Ohio EPA by January 29, 2015.

Copies of the draft permit application and technical support information may be reviewed at http://epa.ohio.gov/dapc/permitsonline.aspx by entering the permit # and/or copies made by first calling the Ohio EPA Central District Office at (614) 728-3778to make an appointment with at the above address during normal business hours. Comments regarding the proposed permit-to-install may be presented at the hearing or mailed to: Ohio EPA – CDO - DAPC, P.O. Box 1049, Columbus, Ohio 43216-1049 attn.: Stephanie Habinak or stephanie.habinak@epa.ohio.gov. Please include DAPC Permit No. P0117801 with your comments.



DRAFT

Division of Air Pollution Control
Permit-to-Install
for
Liberty Casting Co

Facility ID:	0121010003
Permit Number:	P0117801
Permit Type:	Initial Installation
Issued:	12/19/2014
Effective:	To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install
for
Liberty Casting Co

Table of Contents

Authorization

Facility ID:	0121010003
Facility Description:	Gray iron foundry located at 550 South Liberty Road, Delaware, Ohio.
Application Number(s):	A0051280, A0051488, A0051660, A0052199
Permit Number:	P0117801
Permit Description:	Initial installation of inoculation stations, mold making lines, pouring and cooling lines, shakeout and despruing, sand bins, bond/premix bins, coremaking lines, core wash lines, saw and grinding operations, (3) tumbleblasts, (4) ladle preheaters, and (2) annealing ovens. The proposed emissions units will serve the clay bonded sand mold making operations and phenolic urethane no-bake core making operations for the production of gray iron.
Permit Type:	Initial Installation
Permit Fee:	$29,700.00*DO NOT send payment at this time, subject to change before final issuance*
Issue Date:	12/19/2014
Effective Date:	To be entered upon final issuance

This document constitutes issuance to:

Liberty Casting Co
550 Liberty Rd
Delaware, OH 43015

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0117801
Permit Description: Initial installation of inoculation stations, mold making lines, pouring and cooling lines, shakeout and despruing, sand bins, bond/premix bins, coremaking lines, core wash lines, saw and grinding operations, (3) tumbleblasts, (4) ladle preheaters, and (2) annealing ovens. The proposed emissions units will serve the clay bonded sand mold making operations and phenolic urethane no-bake core making operations for the production of gray iron.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**P096**
Company Equipment ID:	Sand Handling & Cooling
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P101**
Company Equipment ID:	Core Wash Operations
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P103**
Company Equipment ID:	Ladle Preheaters (4)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P107**
Company Equipment ID:	Table Cut-Off Saw #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P108**
Company Equipment ID:	Annealing Oven
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: Core Making

Emissions Unit ID:	**P099**
Company Equipment ID:	Core Making Craft CB-22 #1
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P100**
Company Equipment ID:	Palmer Bioset Core Mixer
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

Group Name: Inoculation

Emissions Unit ID:	**P089**
Company Equipment ID:	Inoculation Station A
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

Group Name: Mold Lines

Emissions Unit ID:	**P090**
Company Equipment ID:	FBO Line Molding
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P093**
Company Equipment ID:	HSP Molding
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

Group Name: Pouring and Cooling

Emissions Unit ID:	**P091**
Company Equipment ID:	FBO Pouring
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P094**
Company Equipment ID:	HSP Pouring
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

Group Name: Sand Bins

Emissions Unit ID:	**P097**
Company Equipment ID:	New Sand Bin
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P098**
Company Equipment ID:	Premix Additive Bin
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

Group Name: Shakeout and Despruing

Emissions Unit ID:	**P092**
Company Equipment ID:	FBO Desprue
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P095**
Company Equipment ID:	HSP Shakeout
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

Group Name: Tumbleblast

Emissions Unit ID:	**P104**
Company Equipment ID:	14 CF Tumblast #1
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P105**
Company Equipment ID:	14 CF Tumblast #2
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P106**
Company Equipment ID:	28 Cu Ft Tumblast
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Central District Office.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Central District Office. The written reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted to the Ohio EPA DAPC, Central District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to theOhio EPA DAPC, Central District Officein accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete

b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c) The permittee shall submit progress reports to the Ohio EPA DAPC, Central District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Central District Office.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to theOhio EPA DAPC, Central District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s)not exempt from the requirement to obtain a Permit-to-Install.

11. Construction of New Sources(s) and Authorization to Install

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the

Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

Unless otherwise exempted,no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d)must be obtained beforeoperating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services"facility profile for each new emissions unit identified in this permit.

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in "Air Services" once the transfer is legally completed.The change must be submitted through "Air Services" within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. The following emissions units in this permit are subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63, Subpart EEEEE, Maximum Achievable Control Standards (MACT): P088, P089, P091, P092, P094, P095, P096, P097, P098, P099, P100, P101, P103, P104, P105, P106, P107, and P108. The complete NESHAP/MACT requirements, including the NESHAP/MACT General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District Office or local air agency.

C. Emissions Unit Terms and Conditions

1. P096, Sand Handling & Cooling

Operations, Property and/or Equipment Description:

Sand handling and cooling for both HSP and FBO lines. The system receives both new and premixed sand from pneumatic trucks the Premix is added at a rate of 1.5% and contains 20% sea coal by weight. Process is vented to sand baghouse.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)b. and b)(2)c.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid becoming a major PSD source]	<u>Combined emissions limitations or P096, P097, and P098:</u> Particulate matter (PM) emissions shall not exceed 4.86 tons per rolling, 12-month summation. Particulate matter less than 10 microns in diameter (PM10) shall not exceed 4.13 tons per rolling, 12-month summation. See b)(2)a. – b. and c)(1)
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	See b)(2)b. – c.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)d.i.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-07(B)	See b)(2)e.
e.	OAC rule 3745-17-08(B)	See b)(2)f.
f.	OAC rule 3745-17-11(A)(2)	The emissions limitation established by this rule is less stringent than the emissions limitation established by OAC

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule 3745-31-05(A)(3). See b)(2)d.ii.
g.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)g., c)(2), d)(5), e)(5), and f)(2)
h.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a baghouse at all times the emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(D)]

b. The baghouse serving the emissions unit shall achieve an overall control efficiency of 99%.

[Authority for term: OAC rule 3745-31-05(D)]

c. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

d. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM and PM10 emissions from this air contaminant source since the calculated annual emission rate for PM and PM10 is less than 10 tons/year, taking into account the federally enforceable rule limit of 270,000 tons per year of sand usage, based upon

a rolling, 12-month summation under OAC rule 3745-31-05(D) and the control efficiency .

ii. Particulate emissions shall not exceed 43.6 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/2008]

e. The emissions units are exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(e).

f. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive emissions from these emissions units.

g. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations.
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation.
63.7746	Other requirements to demonstrate continuous compliance.
63.7760	Other requirements and information.
63.7761	Other requirements and information.

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum annual sand usage for the emissions units P096, P097, and P098 shall not exceed 270,000 tons, based upon a rolling, 12-month summation of the sand usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the sand usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Sand Usage
1	22,500
1-2	45,000
1-3	67,500
1-4	90,000
1-5	112,500
1-6	135,000
1-7	157,500
1-8	180,000
1-9	202,500

1-10	225,000
1-11	247,500
1-12	270,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual sand usage limitation shall be based upon a rolling, 12-month summation of the sand usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for P096, P097, and P098:

a. the amount of sand usage each month, in tons;

b. the rolling, 12-month summation of the amount of sand usage, in tons; and

c. the rolling, 12-month summation of PM and PM10 emissions, in tons based on the calculation in f)(1)a. – b. below.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative sand usage for each calendar month.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(2) The pressure drop across the baghouse shall be maintained within the range of 1 to 9 inches of water while the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the pressure drop readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for P096, P097, and P098:

a. all exceedances of the rolling, 12-month limitation on sand usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative sand usage levels**;**

b. all exceedances of the rolling, 12-month summation of PM and PM10 emissions;

c. each period of time (start time and date, end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

d. any period of time (start time and date, end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

e. each incident of deviation in e)(2)c. and/or e)(2)d. where a prompt investigation was not conducted;

f. each incident of deviation described in e)(2)c. and/or e)(2)d. where a prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

g. each incident of deviation described in e)(2)c. and/or e)(2)d. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall also submit annual reports that specify the total PM and PM10 emissions from this emissions unit. This report shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Combined PM emissions for P096, P097, and P098 shall not exceed 4.86 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM = (P) * (EF) * (CE)

where,

PM = PM emissions (monthly)

P = monthly throughput (monthly sand usage rate as determined in d)(1)a.)

EF = 3.6 lb PM/ton sand (WebFIRE, SCC 304000350)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

b. Emissions Limitation:

Combined PM10 emissions for P096, P097, and P098 shall not exceed 4.13 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM10 = (P) * (EF) * (CE)

where,

PM10 = PM10 emissions (monthly)

P = monthly throughput (monthly sand usage rate as determined in d)(1)a.)

EF = 3.06 lb PM10/ton metal (EPA's PM calculator)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM10 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

c. Emission Limitation:

Particulate emissions shall not exceed 43.6 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

d. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

(3) The permittee shall conduct, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing for P088, P089, P091, P092, P094, P095, P096, P097, and P098 shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. For P088, P089, P089, P091, P092, P094, P095, P096, P097, and P098 the emission testing shall be conducted to demonstrate compliance with the allowable PM concentration of 0.01 gr/dscf in the exhaust stream.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - 40 CFR Part 60, Appendix A, Methods 1 through 5

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA, Central District Office. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in

Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

f. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

2. Emissions Unit Group: Sand Bins – P097 and P098

EU ID	Operations, Property and/or Equipment Description
P097	New Sand Bin, Foundry Sand Bin, and Sand Muller – sand is pneumatically fed into the system and emissions are directed to a bin mounted vent. Process vents to sand baghouse.
P098	Premix additive (bond) bin – sand is pneumatically fed into the system and directed to a bin mounted vent

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) See b)(1)b. and b)(2)c.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid becoming a major PSD source]	<u>Combined emissions limitation for P096, P097 and P098:</u> Particulate matter (PM) emissions shall not exceed 4.86 tons per rolling, 12-month summation. Particulate matter less than 10 microns in diameter (PM10) shall not exceed 4.13 tons per rolling, 12-month summation. See b)(2)a. – b. and c)(1) – (2)
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	See b)(2)b. – c.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)d.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-07(B)	See b)(2)e.
e.	OAC rule 3745-17-08(B)	See b)(2)f.
f.	OAC rule 3745-17-11(A)(2)	The emissions limitation established by this rule is less stringent than OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)d.ii.
g.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)g., c)(2), d)(5), e)(5), and f)(2)
h.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a baghouse at all times the emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(D)]

b. The baghouse serving the emissions unit shall achieve an overall control efficiency of 99%.

[Authority for term: OAC rule 3745-31-05(D)]

c. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

d. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM and PM10 emissions from this air contaminant source since the calculated annual emission rate for PM and PM10 is less than 10 tons/year, taking into account the federally enforceable rule limit for P096, P097, and P098 of 270,000 tons per year of sand usage, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

ii. Particulate emissions from the new sand bin, foundry sand bin, and sand muller shall not exceed 43.6 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/2008]

e. The emissions units are exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(e).

f. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive emissions from these emissions units.

g. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum annual sand usage for the emissions units P096, P097, and P098 shall not exceed 270,000 tons, based upon a rolling, 12-month summation of the sand usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the sand usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Sand Usage
1	22,500
1-2	45,000
1-3	67,500
1-4	90,000
1-5	112,500
1-6	135,000
1-7	157,500
1-8	180,000

1-9	202,500
1-10	225,000
1-11	247,500
1-12	270,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual sand usage limitation shall be based upon a rolling, 12-month summation of the sand usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for P096, P097, and P098:

a. the amount of sand handled each month, in tons;

b. the rolling, 12-month summation of the amount of sand handled, in tons; and

c. the rolling, 12-month summation of PM and PM10 emissions, in tons based on the calculation in f)(1)a. – b. below.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(2) The pressure drop across the baghouse shall be maintained within the range of 1 to 9 inches of water while the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for P096, P097, and P098:

a. all exceedances of the rolling, 12-month limitation on sand usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative sand usage levels**;**

b. all exceedances of the rolling, 12-month summation of sand handled;

c. all exceedances of the rolling, 12-month summation of PM and PM10 emissions;

d. each period of time (start time and date, end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

e. any period of time (start time and date, end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

f. each incident of deviation in e)(2)c. and/or e)(2)d. where a prompt investigation was not conducted;

g. each incident of deviation described in e)(2)c. and/or e)(2)d. where a prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

h. each incident of deviation described in e)(2)c. and/or e)(2)d. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall also submit annual reports that specify the total PM and PM10 emissions from this emissions unit. This report shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Combined PM emissions for P096, P097, and P098 shall not exceed 4.86 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM = (P) * (EF) * (CE)

where,

PM = PM emissions (monthly)

P = monthly throughput (monthly sand usage rate as determined in d)(1)a.)

EF = 3.6 lb PM/ton sand (WebFIRE SCC 304000350)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

b. Emissions Limitation:

Combined PM10 emissions for P096, P097, and P098 shall not exceed 4.13 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM10 = (P) * (EF) * (CE)

where,

PM10 = PM10 emissions (monthly)

P = monthly throughput (monthly sand usage rate as determined in d)(1)a.)

EF = 3.06 lb PM10/ton metal (EPA's PM calculator)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM10 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

c. Emission Limitation:

Particulate emissions shall not exceed 43.6 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

d. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

(3) The permittee shall conduct, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing for P088, P089, P091, P092, P094, P095, P096, and P097 shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. For P088, P089, P089, P091, P092, P094, P095, P096, and P097 the emission testing shall be conducted to demonstrate compliance with the allowable overall control efficiency of 99%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - 40 CFR Part 60, Appendix A, Methods 1 through 5

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA, Central District Office. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

3. P101, Core Wash Operations

Operations, Property and/or Equipment Description:

Core wash and release processes. Maximum wash material (Refcotec1768) employed is 0.7 gallons/hour and contains 3.94 lbs VOC/gal. Maximum core release material (Zip Slip LP78 1495, Naptha, Aluminum, Mineral Spirits) employed is 0.03 gallons/hour and contains 5.48 lbs VOC/gal

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) See b)(1)c., b)(2)a. and d)(1)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid non-attainment NSR]	Volatile organic compound (VOC) emissions from the core was and release operations shall not exceed 1.22 tons per rolling, 12-month summation. The requirements of this rule are equivalent to the requirements established by 40 CFR Part 63, Subpart EEEEE. See c)(1) – (5)
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	The requirements of this rule are equivalent to the requirements established by 40 CFR Part 63, Subpart EEEEE. See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)b.
g.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	See b)(2)c., c)(6), d)(4), and e)(5)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP)

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/08]

b. This requirement applies once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate for VOC is less than 10 tons/year, taking into account the federally enforceable rule limit of 1,700 gallons of core wash and 80 gallons of core release material per year of sand handled, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08]

c. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7760	Other requirements and information
63.7761	Other requirements and information

c) Operational Restrictions

(1) All core washes applied to cores shall be lit-off within one-minute of application.

[Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and 40 CFR Part 63, Subpart EEEEE]

(2) The maximum core wash VOC content shall not exceed 3.94 pounds per gallon, excluding water and exempt solvents.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(3) The maximum annual core wash usage for this emissions unit shall not exceed 1,700 tons, based upon a rolling, 12-month summation of the core wash usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the core wash usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Core Wash Usage
1	142
1-2	284
1-3	426
1-4	568
1-5	710
1-6	852
1-7	994
1-8	1,136
1-9	1,278
1-10	1,420
1-11	1,562
1-12	1,700

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual core wash usage limitation shall be based upon a rolling, 12-month summation of the core wash usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(4) The maximum core release VOC content shall not exceed 5.48 pounds per gallon, excluding water and exempt solvents.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(5) The maximum annual core wash usage for this emissions unit shall not exceed 80 tons, based upon a rolling, 12-month summation of the core release usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the core release usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Core Release Usage
1	6.66
1-2	13.32
1-3	19.98
1-4	26.64
1-5	33.31
1-6	39.98
1-7	46.65
1-8	53.32
1-9	59.99

1-10	66.66
1-11	73.33
1-12	80

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual core release usage limitation shall be based upon a rolling, 12-month summation of the core release usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(6) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(b)(6)	Procedures for providing an ignition source to mold vents and sand mold systems
63.7720	General requirements for complying with subpart
63.7745(a)(5)	Continuous compliance with the operational requirements
63.7746	Other requirements to demonstrate continuous compliance

d) Monitoring and/or Recordkeeping Requirements

(1) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit’s maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified Permit-to-Install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

(2) The permittee shall maintain daily records of the following information for the core wash material:

a. any core wash application in which the core wash was not lit-off within one-minute of application;

b. the reason for not lighting-off the core wash within one-minute of application; and

c. the time, in minutes, before the old and/or core wash was lit-off.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall maintain monthly records of the following information for the emissions unit:

a. the company identification of each core wash and core release material used;

b. the amount, in pounds, of each core wash and core release material used;

c. the VOC content of each core wash and core release material used, in pounds;

d. the rolling, 12-month summation of core wash and core release materials used, in pounds; and

e. the VOC emissions rate from both core wash and core release materials based on a rolling, 12-month summation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7742	Monitoring and recordkeeping to demonstrate continuous compliance

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit to the Director (Central District Office (CDO)) deviation (excursion) reports which identify any day during which a core wash was not lit off within one minute of application. Each report shall identify the reason for not lighting off the core wash within one minute of application, and the estimated total quantity of material(s) emitted in pounds. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. the rolling, 12-month VOC emission limitation;

b. the core wash and/or core release material VOC content limit;

c. the rolling, 12-month core wash and core release limitations.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(4) The permittee shall submit annual reports that specify the total combined VOC emissions from emission unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for emission units in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7750	Notification requirement
63.7751	Reporting requirement

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

VOC emissions shall not exceed 1.22 tons based upon a rolling, 12-month summation

Applicable Compliance Method:

Compliance shall be determined by the monitoring and recordkeeping in Section d)(3)d. and e.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

4. P103, Ladle Preheaters (4)

Operations, Property and/or Equipment Description:

(4) transfer ladles with a transfer rate of 5 tons/hr per ladle, and natural gas usage of 5.2MMbtu/hr.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) See b)(1)a., b)(2)a. – b., and f)(1)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	The permittee shall install a burner that is designed to meet the following: 0.007 lb PM/mmBtu heat input; 0.006 lb PM10/mmBtu heat input; 0.002 lb PM2.5/mmBtu heat input; 0.0006 lb SOx/mmBtu heat input; 0.002 lb NOx/mmBtu heat input; 0.005 lb VOC/mmBtu heat input; and 0.08 lb CO/mmBtu heat input. See b)(2)a. – b.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)c.i.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-07(B)	See b)(2)d.
d.	OAC rule 3745-17-08(B)	See b)(2)e.
e.	OAC rule 3745-17-10(B)	The emissions limitation specified by this

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule is less stringent than the emission limitation specified in OAC rule 3745-31-05(A)(3). See b)(2)c.ii.
f.	OAC rule 3745-17-11(A)(2)	The emissions limitation specified by this rule is less stringent than the emissions limitation specified in OAC rule 3745-31-05(A)(3). See b)(2)c.iii.
g.	OAC rule 3745-18-06(E)(2)	The emissions limitation specified by this rule is less stringent than the emission limitation specified in OAC rule 3745-31-05(A)(3). See b)(2)c.iv.
h.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)f., c)(2), d)(4), e)(4), and f)(2)
i.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The hourly and yearly emissions limitations for this emissions unit were established to reflect the potential to emit based on natural gas usage. Therefore, it is not necessary to develop additional monitoring, recordkeeping, and/or reporting requirements to ensure compliance with these limits.

b. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP)

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/08]

c. This requirement applies once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, PM10, PM2.5, SOx, NOx, VOC, and CO emissions from this air contaminant source since the uncontrolled potential to emit for PM, PM10, PM2.5, SOx, NOx, VOC, and CO is less than 10 tons/year.

ii. The maximum allowable amount of particulate emissions shall be 0.020 pound per million Btu of actual heat input.

iii. Particulate emissions shall not exceed 12 pounds per hour.

iv. The maximum emission of sulfur dioxide from the source shall not exceed 88.19 pounds of sulfur dioxide per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08]

d. This emissions unit is exempt from OAC rule 3745-17-07(B)(1), pursuant to OAC rule 3745-17-07(B)(11)(d).

e. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.

f. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations.
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The emissions unit shall burn only natural gas.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-17-10(B)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-10(B)]

(2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(3) The permittee may, upon receipt of written approval from Ohio EPA, Central District Office, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks

would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(4) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and for how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit deviation (excursion) reports that identify each day when fuels other than natural gas were burned in this emissions unit. Each report shall be submitted within 30 days after the occurrence of the deviation.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-10(B)]

(3) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(4) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when

63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.007 lb PM/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

b. Emission Limitation:

0.006 lb PM10/mmBtu heat input

0.002 lb PM2.5/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 201 of 40 CFR Part 51, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

c. Emission Limitation:

0.0006 lb SOx/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 201 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

d. Emission Limitation:

0.002 lb NOx/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Methods 7 and 20 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

e. Emission Limitation:

0.005 lb VOC/mmBtu heat input

Applicable Compliance Method(s):

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Methods 18, 21, 24, 25, and 320 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

f. Emission Limitation:

0.08 lb CO/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 10 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

g. Emission Limitation:

Particulate emissions shall not exceed 12 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

h. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

g) Miscellaneous Requirements

(1) None.

5. P107, Cutting and Grinding

Operations, Property and/or Equipment Description:

Cut-off saws, (8) stationary snag grinders, (3) 48" hand-held bench grinders, (3) 36" hand-held bench grinders. The maximum hourly finishing rate for all operations is 2.5 tons/hr. Vents to C&F collector.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) See b)(1)b. and b)(2)c.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid becoming a major PSD source]	Particulate matter (PM) emissions shall not exceed 0.15 tons per rolling, 12-month summation. Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.15 tons per rolling, 12-month summation. See b)(2)a. – b.
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	See b)(2)b. – c.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)d.i.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
e.	OAC rule 3745-17-07(B)	See b)(2)e.
f.	OAC rule 3745-17-08(B)	See b)(2)f.
g.	OAC rule 3745-17-11(A)(2)	The emissions limitation established by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3). See b)(2)d.ii.
h.	40 CFR Part 63, Subpart EEEEE	For each building or structure housing any iron foundry emissions source at the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)g., c)(2), d)(5), e)(5), and f)(2)
i.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a baghouse at all times the emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(D)]

b. The baghouse serving the emissions unit shall achieve an overall control efficiency of 98.5%.

[Authority for term: OAC rule 3745-31-05(D)]

c. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

d. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM and PM10 emissions from this air contaminant source since the calculated annual emission rate for PM and PM10 is less than 10 tons/year, taking into account the federally enforceable rule limit of 5,000 hours per year, based upon a rolling, 12-month summation and the use of a baghouse system under OAC rule 3745-31-05(D).

ii. Particulate emissions shall not exceed 12 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08]

e. This emissions unit is exempt from OAC rule 3745-17-07(B)(1), pursuant to OAC rule 3745-17-07(B)(11)(d).

f. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.

g. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum annual operating hours for this emissions unit shall not exceed 5,000, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Operating Hours
1	417
1-2	834
1-3	1,251
1-4	1,668
1-5	2,085
1-6	2,502
1-7	2,919
1-8	3,336
1-9	3,753
1-10	4,170
1-11	4,587
1-12	5,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating

hourslimitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the rolling, 12-month summation of PM and PM10 emissions, in tons based on the calculation in f)(1)a. – b. below.

b. the operating hours for each month; and

c. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(2) The pressure drop across the baghouse shall be maintained within the range of 1 to 9 inches of water while the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping.
63.7753	What form records must be kept in and how long.

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all exceedances of the rolling, 12-month summation of PM and PM10 emissions;

b. all exceedances of the rolling, 12-month limitation on the hours of operation for this emissions unit; and for the first 12 calendar months of operation or the first

12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation;

c. each period of time (start time and date, end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

d. any period of time (start time and date, end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

e. each incident of deviation in e)(2)c. and/or e)(2)d. where a prompt investigation was not conducted;

f. each incident of deviation described in e)(2)c. and/or e)(2)d. where a prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

g. each incident of deviation described in e)(2)c. and/or e)(2)d. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall also submit annual reports that specify the total PM and PM_{10} emissions from this emissions unit. This report shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PM emissions shall not exceed 0.15 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM = (P) * (EF) * (CE)

where,

PM = PM emissions (monthly)

P = monthly operating hours (as determined in d)(1)b.)

EF = 1.6 lb PM/ton sand (WebFIRE SCC 30400340)

CE = control efficiency (98.5%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

b. Emissions Limitation:

PM10 emissions shall not exceed 0.15 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM10 = (P) * (EF) * (CE)

where,

PM = PM emissions (monthly)

P = monthly operating hours (as determined in d)(1)b.)

EF = 1.6 lb PM10/ton sand (WebFIRE SCC 30400340)

CE = control efficiency (98.5%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

c. Emission Limitation:

Particulate emissions shall not exceed 12 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

d. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

(3) The permittee shall conduct, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing for P104, P105, P106, and P107, shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. For P104, P105, P106, and P107 the emission testing shall be conducted to demonstrate compliance with the overall control efficiency of 98.5%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - 40 CFR Part 60, Appendix A, Methods 1 through 5

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA, Central District Office. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

f. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

6. P108, Annealing Ovens

Operations, Property and/or Equipment Description:

(2) natural gas fired annealing ovens with a combined heat input rate of 4.6 MMbtu/hr and process rate of 0.4 tons casting/hour.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) See b)(1)a., b)(2)a. – b., and f)(1)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	The permittee shall install a burner that is designed to meet the following: 0.007 lb PM/mmBtu heat input; 0.006 lb PM10/mmBtu heat input; 0.002 lb PM2.5/mmBtu heat input; 0.0006 lb SOx/mmBtu heat input; 0.002 lb NOx/mmBtu heat input; 0.005 lb VOC/mmBtu heat input; and 0.08 lb CO/mmBtu heat input. See b)(2)a. – b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)c.i.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
d.	OAC rule 3745-17-07(B)	See b)(2)d.
e.	OAC rule 3745-17-08(B)	See b)(2)e.
f.	OAC rule 3745-17-10(B)	The emissions limitation specified by this rule is less stringent than the emission

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		limitation specified in OAC rule 3745-31-05(A)(3). See b)(2)c.ii.
g.	OAC rule 3745-17-11(A)(2)	The emissions limitation specified by this rule is less stringent than the emissions limitation specified in OAC rule 3745-31-05(A)(3). See b)(2)c.iii
h.	OAC rule 3745-18-06(E)(2)	The emissions limitation specified by this rule is less stringent than the emission limitation specified in OAC rule 3745-31-05(A)(3). See b)(2)c.iv.
i.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)f., c)(2), d)(5), e)(4), and f)(2)
j.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The hourly and yearly emissions limitations for this emissions unit were established to reflect the potential to emit based on natural gas usage. Therefore, it is not necessary to develop additional monitoring, recordkeeping, and/or reporting requirements to ensure compliance with these limits.

b. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

c. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, PM10, PM2.5, SOx, NOx, VOC, and CO emissions from this air contaminant source since the uncontrolled potential to emit for PM, PM10, PM2.5, SOx, NOx, VOC, and CO is less than 10 tons/year.

ii. The maximum allowable amount of particulate emissions shall be 0.020 pound per million Btu of actual heat input.

iii. Particulate emissions shall not exceed 2.2 pounds per hour.

iv. The maximum emission of sulfur dioxide from the source shall not exceed 88.19 pounds of sulfur dioxide per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08]

d. This emissions unit is exempt from OAC rule 3745-17-07(B)(1), pursuant to OAC rule 3745-17-07(B)(11)(d).

e. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.

f. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The emissions unit shall burn only natural gas.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-17-10(B)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-10(B)]

(2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(4) The permittee may, upon receipt of written approval from Ohio EPA, Central District Office, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks

would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit deviation (excursion) reports that identify each day when fuels other than natural gas were burned in this emissions unit. Each report shall be submitted within 30 days after the occurrence of the deviation.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-10(B)]

(3) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(4) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when

63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.007 lb PM/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

b. Emission Limitation:

0.006 lb PM10/mmBtu heat input

0.002 lb PM2.5/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 201 of 40 CFR Part 51, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

c. Emission Limitation:

0.0006 lb SOx/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 201 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

d. Emission Limitation:

0.002 lb NOx/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Methods 7 and 20 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

e. Emission Limitation:

0.005 lb VOC/mmBtu heat input

Applicable Compliance Method(s):

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Methods 18, 21, 24, 25, and 320 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

f. Emission Limitation:

0.08 lb CO/mmBtu heat input

Applicable Compliance Method:

The heat input factor is found in AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, Section 4: Natural Gas Combustion, Table 1.4-2If required, compliance shall be based upon Method 10 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3), effective 06/30/08]

g. Emission Limitation:

Particulate emissions shall not exceed 2.2 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

h. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

g) Miscellaneous Requirements

(1) None.

7. Emissions Unit Group -Mold Lines: P090 and P093

EU ID	Operations, Property and/or Equipment Description
P090	FBO mold line that employs green (clay bonded) sand, (1) 45 ton/hr mixer (for both FBO and HSP), and mold release material.
P093	HSP mold line that employs green (clay bonded) sand, (1) 45 ton/hr mixer (for both FBO and HSP), and mold release material.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) See b)(1)a., b)(2)a.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-07(B)	See b)(2)c.
e.	OAC rule 3745-17-08(B)	See b)(2)d.
d.	OAC rule 3745-17-11(A)(2)	The emissions limitation established by this rule is less stringent than the emissions limitation established by OAC rule 3745-31-05(A)(3). See b)(2)b.ii.
e.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)e., c)(1), d)(2), e)(3), and f)(1)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

The emission limitation established by this rule is equivalent to the emissions limitation established by PTI P0116874 under OAC rule 3745-31-05(D) for the federally enforceable rule limit of 25,000 tons per year metal melted.

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

b. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, PM10, and PM2.5 emissions from this air contaminant source since the calculated annual emission rate for PM, PM10, and PM2.5 is less than 10 tons/year, taking into account the federally enforceable rule limit of 25,000 tons per year metal melted, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D), established by PTI P0116874 issued final 10/23/2014.

ii. Particulate emissions shall not exceed 12 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(ii), as effective 06/30/08]

c. The emissions units are exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(e).

d. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive emissions from these emissions units.

e. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal

operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(3) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

a. Emission Limitation:

Particulate emissions shall not exceed 12 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

g) Miscellaneous Requirements

(1) None.

8. P099, Betaset Core Making

Operations, Property and/or Equipment Description:

Betaset Core Making Craft CB-22 with 3 core making machines, and a maximum sand throughput of 1.8 tons/hr and annual binder usage rate of 189 tpy.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) See b)(1)b., b)(1)d., b)(2)a., d)(2) – (5), and e)(4)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid non-attainment NSR]	Volatile organic compound (VOC) emissions shall not exceed 5.74 tons per rolling, 12-month summation. See c)(1) – (2)
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	See b)(2)a., and c)(1) – (2)
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)b.
d.	ORC 3704.03(F)	See d)(2) – (5), e)(4)
e.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	The binder chemical formulation shall not contain methanol as a specific ingredient of the catalyst formulation. See b)(2)c., c)(3), d)(6), and e)(5)
f.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less

than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

b. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate for VOC is less than 10 tons/year, taking into account the federally enforceable rule limit of 192,000 pounds of part I resin and 124,800 pounds of part II coreactant per year, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08]

c. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum annual part I resin usage for this emissions unit shall not exceed 192,000 pounds, based upon a rolling, 12-month summation of the part I resin usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the part I resin usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative resin part I Usage (lbs)
1	16,000
1-2	32,000
1-3	96,000
1-4	64,000
1-5	80,000
1-6	96,000
1-7	112,000
1-8	128,000

1-9	144,000
1-10	160,000
1-11	176,000
1-12	192,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual part I resin usage limitation shall be based upon a rolling, 12-month summation of the part I resin usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The maximum annual part II coreactant usage for this emissions unit shall not exceed 124,800 pounds, based upon a rolling, 12-month summation of the part II coreactant usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the part II coreactant usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative part II coreactant Usage (lbs)
1	10,400
1-2	20,800
1-3	31,200
1-4	41,600
1-5	52,000
1-6	62,400
1-7	72,800
1-8	83,200
1-9	93,600
1-10	104,000
1-11	114,400
1-12	124,800

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual part II coreactant usage limitation shall be based upon a rolling, 12-month summation of the part II coreactant usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(3) The permittee shall comply with the applicable work practice requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7700(d)	Work practice standards
63.7710(a)	Operation and maintenance requirements
63.7720	General requirements for complying with subpart
63.7735(c)	Demonstrate initial compliance with work practice standards

63.774(c)	Demonstrate continuous compliance with work practice standards
63.7446	Other requirements for continuous compliance

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the company identification of each part I resin and part II coreactant material used;

b. the amount, in pounds, of each part I resin and part II coreactant material used;

c. the rolling, 12-month, summation of part I resin used, in pounds;

d. the rolling, 12-month summation of part II coreactant used, in pounds; and

e. the VOC emissions rate from both part I resin and part II coreactant based on a rolling, 12-month summation.

[Authority for term: OAC rule 3745-77-07(A)(3) and OAC rule 3745-31-05(D)]

(2) The permit-to-install application for this emissions unit(s), P099, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "8" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: methanol

TLV (mg/m3): 262.09

Maximum Hourly Emission Rate (lbs/hr): 2.35

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 335.4

MAGLC (ug/m3): 6240

The permittee, has demonstrated that emissions of methanol,from emissions unit P099, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(3) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(6) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a)(4)	Records of the annual quantity of each chemical binder or coating material used to coat or make molds and cores, the Material Data Safety Sheet or other documentation that provides the chemical composition of each component, and the annual quantity of HAP used in these chemical binder or coating materials at the foundry as calculated from the recorded quantities and chemical compositions.
63.7752(c)	Records required by 63.7744
63.7753	Duration records shall be kept

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. the rolling, 12-month VOC emission limitation;

b. the rolling, 12-month part I resin usage limitations; and

c. the rolling, 12-month part II coreactant usage limitations.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall submit annual reports that specify the total combined VOC emissions from emission unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for emission units in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(4) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s); and

d. a summary of the results of the updated modeling, including the input changes; and

e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[Authority for term: OAC rule 3745-77-07(A)(3)(c), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7750	Notifications
63.7751	Reports

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

VOC emissions shall not exceed 5.74 tons based upon a rolling, 12-month summation

Applicable Compliance Method:

Compliance shall be determined by the monitoring and recordkeeping in Section d)(1)e. and the equation below.

E = 0.5 * [0.1(R) + 0.03(MF)]

where,

E = VOC emissions, monthly

R = part I resin usage, monthly (as determined in section d)(1)a.)

MF = part II coreactant usage, monthly (as determined in section d)(1)b.)

The above equation comes from "Estimation of Emissions from the Beta Set Process; Emissions from Sand Mixing, Core Making and Core Storage Operations," HAI, 7/28/14.

The updated rolling, 12-month summation of the total VOC emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

9. P100, PUNB Core Making

Operations, Property and/or Equipment Description:

Phenolic Urethane Nobake Palmer Core Mixer. Maximum sand throughput is 0.5 tons/hr and annual binder usage of 58.5 tons/year.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) See b)(1)b., b)(1)d., d)(2) – (5), and e)(4)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid non-attainment NSR]	Volatile organic compound (VOC) emissions shall not exceed 5.30 tons per rolling, 12-month summation. See c)(1) – (3)
b.	OAC rule 3745-31-05(A)(3), effective 06/30/08	See b)(2)a. and c)(1) – (3)
c.	OAC rule 3745-31-05(A)(3)(a)(ii), effective 06/30/08	See b)(2)b.
d.	ORC 3704.03(F)	See d)(2) – (5), e)(4)
e.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	The binder chemical formulation shall not contain methanol as a specific ingredient of the catalyst formulation. See b)(2)c., c)(4), d)(6), and e)(5)
f.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

b. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate for VOC is less than 10 tons/year, taking into account the federally enforceable rule limits of 64,360 pounds of PEP SET Q I, 52,660 pounds of PEP SET Q II, per year, and 11,700 pounds PEP SET Q catalyst based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

[Authority for term: OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08]

c. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum annual PEP SET Q I usage for this emissions unit shall not exceed 64,360 pounds, based upon a rolling, 12-month summation of the PEP SET Q I usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the PEP SET Q I usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative PEP SET Q I (lbs)
1	5363
1-2	10,727
1-3	16,090
1-4	21,453
1-5	26,817
1-6	32,180
1-7	37,543

1-8	42,906
1-9	48,270
1-10	53,633
1-11	58,996
1-12	64,360

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual PEP SET Q I usage limitation shall be based upon a rolling, 12-month summation of the PEP SET Q I usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The maximum annual PEP SET Q II usage for this emissions unit shall not exceed 52,660 pounds, based upon a rolling, 12-month summation of the PEP SET Q II usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the PEP SET Q II usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative PEP SET Q II Usage (lbs)
1	4,383
1-2	8,767
1-3	13,150
1-4	17,533
1-5	21,917
1-6	26,300
1-7	30,683
1-8	35,066
1-9	39,450
1-10	43,833
1-11	48,217
1-12	52,660

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual PEP SET Q II usage limitation shall be based upon a rolling, 12-month summation of the PEP SET Q II usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(3) The maximum annual PEP SET Q catalyst usage for this emissions unit shall not exceed 11,700 pounds, based upon a rolling, 12-month summation of the PEP SET Q catalyst usage figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the PEP SET Q catalyst usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative PEP SET Q Catalyst Usage (lbs)
1	975
1-2	1,950
1-3	2,925
1-4	3,900
1-5	4,875
1-6	5,850
1-7	6,825
1-8	7,800
1-9	8,775
1-10	9,750
1-11	10,725
1-12	11,700

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual PEP SET Q catalyst usage limitation shall be based upon a rolling, 12-month summation of the PEP SET Q catalyst usage figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(4) The permittee shall comply with the applicable work practice requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7700(d)	Work practice standards
63.7710(a)	Operation and maintenance requirements
63.7720	General requirements for complying with subpart
63.7735(c)	Demonstrate initial compliance with work practice standards
63.774(c)	Demonstrate continuous compliance with work practice standards
63.7446	Other requirements for continuous compliance

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the company identification of PEP SET QI, PEP SET QII, and PEP SET Q catalyst used;

b. the amount, in pounds, of each PEP SET QI, PEP SET QII, and PEP SET Q catalyst used;

c. the rolling, 12-month, summation of PEP SET Q I used, in pounds;

d. the rolling, 12-month summation of PEP SET Q II used, in pounds;

e. the rolling, 12-month summation of PEP SET Q catalyst used, in pounds;

f. the VOC emissions rate (based on the calculation in Section f)(1)a. – c.) from all PEP SET Q I, PEP SET Q II, and PEP SET Q catalyst based on a rolling, 12-month summation.

[Authority for term: OAC rule 3745-77-07(A)(3) and OAC rule 3745-31-05(D)]

(2) The permit-to-install application for this emissions unit, P100, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this/these emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN3. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) “Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices”; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) “Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices”; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “8” hours per day and “5” days

per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: naphthalene

TLV (mg/m3): 52.43

Maximum Hourly Emission Rate (lbs/hr): 0.002

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.3401

MAGLC (ug/m3): 1250

The permittee, has demonstrated that emissions of naphthalene,from emissions unit P100, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or

process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Authority for term: OAC rule 3745-77-07(C), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(6) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a)(4)	Records of the annual quantity of each chemical binder or coating material used to coat or make molds and cores, the Material Data Safety Sheet or other documentation that provides the chemical composition of each component, and the annual quantity of HAP used in these chemical binder or coating materials at the foundry as calculated from the recorded quantities and chemical compositions.
63.7752(c)	Records required by 63.7744
63.7753	Duration records shall be kept

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. the rolling, 12-month VOC emission limitation;

b. the rolling, 12-month PEP SET QI usage limitations;

c. the rolling, 12-month PEP SET QII usage limitations; and

d. the rolling, 12-month PEP SET Q catalyst usage limitations.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall submit annual reports that specify the total combined VOC emissions from emission unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for emission units in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(4) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s); and

d. a summary of the results of the updated modeling, including the input changes; and

e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[Authority for term: OAC rule 3745-77-07(A)(3)(c), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7750	Notifications
63.7751	Reports

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

VOC emissions shall not exceed 5.30 tons based upon a rolling, 12-month summation

Applicable Compliance Method:

Compliance shall be determined by the monitoring and recordkeeping in Section d)(1)e. and the equation below for each PEP SET QI, PEP SET QII, and PEP SET Q catalyst.

E = (EF) * (usage) * (ton/2000 lb)

where,

E = VOC emissions, monthly

EF = 164.84 lb VOC/ton binder (ASK Chemical, "VOC-HAP Regulatory Datasheet, OCMA Report for PEP SET QI 4180/ QII 6180/ Q600 catalyst," 11/10/14)

usage = material usage, monthly (Section d)(1)b.)

Monthly VOC emissions shall be determined by summing the monthly VOC emissions rates for each PEP SET QI, PEP SET QII, and PEP SET Q catalyst.

The updated rolling, 12-month summation of the total VOC emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

10. Emissions Unit Group -Inoculation: P088 and P089

EU ID	Operations, Property and/or Equipment Description
P088	Inoculation A, serving A furnaces. Metal is tapped directly into a transfer ladle with inoculants present when ductile is scheduled for production. Inoculation has a transfer rate of 5 tons/hour and has a hood positioned over the ladle. Vents to sand baghouse.
P089	Inoculation B, serving B furnaces. Metal is tapped directly into a transfer ladle with inoculants present when ductile is scheduled for production. Inoculation has a transfer rate of 5 tons/hour and has a hood positioned over the ladle. Vents to sand baghouse.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) See b)(1)b. and b)(2)d.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid non-attainment NSR and becoming a major PSD source]	<u>Combined emissions limitations P088 and P089:</u> Particulate matter (PM) emissions shall not exceed 1.0 tons per rolling, 12-month summation. Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.8 tons per rolling, 12-month summation. Volatile organic compound (VOC) emissions shall not exceed 0.06 tons per rolling, 12-month summation. See b)(2)a. – c. and c)(1)
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	For PM and PM10 emissions see b)(2)b. and d. For VOC emissions see b)(2)d. and c)(1).
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)e.i.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-07(B)	See b)(2)f.
e.	OAC rule 3745-17-08(B)	See b)(2)g.
f.	OAC rule 3745-17-11(A)(2)	The emissions limitation established by this rule is less stringent than the requirements established by OAC rule 3745-31-05(A)(3). See b)(2)e.ii.
g.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)h., c)(2), d)(6), e)(5), and f)(2)
h.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a baghouse at all times the emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(D)]

b. The baghouse serving the emissions unit shall achieve an overall control efficiency of 99%.

[Authority for term: OAC rule 3745-31-05(D)]

c. The permittee shall use a capture hood with 98% capture efficiency.

d. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/2008]

e. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, PM10, and VOC emissions from this air contaminant source since the calculated annual emission rate for PM. PM10, and VOC is less than 10 tons/year, taking into account the federally enforceable rule limit of 25,000 tons per year metal inoculated, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D), established by PTI P0116874 issued final 10/23/2014.

ii. Particulate emissions shall not exceed 12 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(ii), as effective 06/30/08]

f. The emissions units are exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(e).

g. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive emissions from these emissions units.

h. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum annual metal inoculated in emissions units P088 and P089 shall not exceed 25,000 tons, based upon a rolling, 12-month summation of the metal inoculated figures. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the metal inoculated levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Sand Usage (lbs)
1	2,083
1-2	4,166
1-3	6,249
1-4	8,332
1-5	10,415
1-6	12,498
1-7	14,581
1-8	16,664
1-9	18,748
1-10	20,832
1-11	22,916
1-12	25,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual metal inoculated limitation shall be based upon a rolling, 12-month summation of the metal inoculated figures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for P088 and P089:

a. the amount of metal inoculated rate for each month, in tons in each emissions unit;

b. the combined rolling, 12-month summation of the amount of metal inoculated, in tons; and

c. the combined rolling, 12-month summation of PM and PM10 emissions, in tons based on the calculation in f)(1)a. – b. below.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(2) The pressure drop across the baghouse shall be maintained within the range of 1 to 9 inches of water while the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee may, upon receipt of written approval from Ohio EPA, Central District Office, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(6) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for P088 and P089:

a. all exceedances of the rolling, 12-month limitation on metal inoculated; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative metal inoculated levels**;**

b. all exceedances of the rolling, 12-month summation of metal inoculated; and

c. all exceedances of the rolling, 12-month summation of PM and PM10 emissions.

d. each period of time (start time and date, end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

e. any period of time (start time and date, end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

f. each incident of deviation in e)(2)c. and/or e)(2)d. where a prompt investigation was not conducted;

g. each incident of deviation described in e)(2)c. and/or e)(2)d. where a prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

h. each incident of deviation described in e)(2)c. and/or e)(2)d. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall also submit annual reports that specify the total PM and PM10 emissions from this emissions unit. This report shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Combined PM emissions for P088 and P089 shall not exceed 1.0 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM = (P) * (EF) * (CE)

where,

PM = PM emissions (monthly)

P = monthly throughput (monthly inoculation rate as determined in d)(1)a.)

EF = 4.0 lb PM/ton metal (WebFIRE, SCC 30400310)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

b. Emissions Limitation:

Combined PM10 emissions for P088 and P089 shall not exceed 0.8 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM10 = (P) * (EF) * (CE)

where,

PM10 = PM10 emissions (monthly)

P = monthly throughput (monthly inoculation rate as determined in d)(1)a.)

EF = 3.2 lb PM10/ton metal (WebFIRE, SCC 30400310)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM10 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

c. Emission Limitation:

Combined VOC emissions for P088 and P089 shall not exceed 0.06 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

VOC = (P) * (EF)

where,

VOC = VOC emissions (monthly)

P = monthly throughput (monthly inoculation rate as determined in d)(1)a.)

EF = 0.005 lb VOC/ton metal (WebFIRE SCC 30400310)

The updated rolling, 12-month summation of the total VOC emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

d. Emission Limitation:

Particulate emissions shall not exceed 12 pounds per hour

Applicable Compliance Method:

The emission limitation was established by “Table I” in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

e. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

(3) The permittee shall conduct, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing for P088, P089, P091, P092, P094, P095, P096, P097, and P098 shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. For P088, P089, P089, P091, P092, P094, P095, P096, P097, and P098 the emission testing shall be conducted to demonstrate compliance with the allowable PM concentration of 0.01 gr/dscf in the exhaust stream.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - 40 CFR Part 60, Appendix A, Methods 1 through 5

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA, Central District Office. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to

submit such notification for review and approval prior to the test(s) may result in Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

f. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

11. Emissions Unit Group -Shakeout and Despruing: P092,P095

EU ID	Operations, Property and/or Equipment Description
P092	FBO shakeout and desprue lines equipped with a capture hood, and vents to sand baghouse.
P095	HSP shakeout and desprue lines equipped with a capture hood, and vents to sand baghouse.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) See b)(1)c. and b)(2)d.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid PSD and non-attainment NSR]	<u>Combined emissions limitations for P092 and P095:</u> Particulate matter (PM) emissions shall not exceed 0.80 tons per rolling, 12-month summation. Particulate matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.56 tons per rolling, 12-month summation. Particulate matter less than 2.5 microns in diameter (PM2.5) emissions shall not exceed 0.34 tons per rolling, 12-month summation. Volatile organic compound (VOC) emissions shall not exceed 15.0 tons per rolling, 12-month summation. See b)(2)a. – c.
b.	ORC 3704.03(T)	The VOC emissions limitation is equivalent to the requirements of OAC rule 3745-31-05(D).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	For PM, PM10, and PM2.5 emissions see b)(2)b. and d., and c)(1).
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	For PM, PM10, and PM2.5 emissions see b)(2)e.i.
e.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-07(B)	See b)(2)f.
g.	OAC rule 3745-17-08(B)	See b)(2)g.
h.	OAC rule 3745-17-11(A)(2)	The emissions limitation established by this rule is less stringent than the requirements established by OAC rule 3745-31-05(A)(3). See b)(2)e.ii.
i.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)h., c)(2), d)(6), e)(5), and f)(2)
j.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a baghouse at all times the emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(D)]

b. The baghouse shall achieve an overall control efficiency of 99%.

[Authority for term: OAC rule 3745-31-05(D)]

c. The permittee shall use a capture hood with 98% capture efficiency.

d. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

e. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, PM10, and PM2.5 emissions from this air contaminant source since the calculated annual emission rate for PM, PM10, and PM2.5 is less than 10 tons/year, taking into account the federally enforceable rule limit of 5,000 operating hours per year, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

ii. Particulate emissions shall not exceed 12 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(ii), as effective 06/30/08]

f. The emissions units are exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(e).

g. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive emissions from these emissions units.

h. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum operating time for P092 and P095 shall not exceed 5,000 hours per year based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Operating Hours
1	417
1-2	833
1-3	1,250
1-4	1,667
1-5	2,083
1-6	2,500
1-7	2,917
1-8	3,333
1-9	3,750
1-10	4,167
1-11	4,583
1-12	5,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for emissions units P092 and P095:

a. the operating hours for each month;

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours; and

c. the rolling, 12-month summation of PM, PM10, PM2.5, and VOC emissions, in tons based on the calculation in f)(1)a. – d. below.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(2) The pressure drop across the baghouse shall be maintained within the range of 1 to 9 inches of water while the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee may, upon receipt of written approval from Ohio EPA, Central District Office, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks

would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(6) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all exceedances of the rolling, 12-month summation of PM, PM10, PM2.5, and VOC emissions;

b. all exceedances of the rolling, 12-month limitation on the hours of operation for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation;

c. each period of time (start time and date, end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

d. any period of time (start time and date, end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

e. each incident of deviation in e)(2)c. and/or e)(2)d. where a prompt investigation was not conducted;

f. each incident of deviation described in e)(2)c. and/or e)(2)d. where a prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

g. each incident of deviation described in e)(2)c. and/or e)(2)d. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall also submit annual reports that specify the total PM and PM10 emissions from this emissions unit. This report shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

Combined PM emissions for P092 and P095 shall not exceed 0.80 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM = (P) * (EF) * (CE)

where,

PM = PM emissions (monthly)

P = monthly operating hours (as determined in d)(1)a.)

EF = 3.2 lb PM/ton metal (WebFIRE SCC 30400331)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

b. Emissions Limitation:

Combined PM10 emissions for P092 and P095 shall not exceed 0.56 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM10 = (P) * (EF) * (CE)

where,

PM10 = PM10 emissions (monthly)

P = monthly operating hours (determined in d)(1)a.)

EF = 2.24 lb PM10/ton metal (WebFIRE SCC 30400331)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM10 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

c. Emission Limitation:

Combined PM2.5 emissions for P092 and P095 shall not exceed 0.34 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM2.5 = (P) * (EF) * (CE)

where,

PM2.5 = PM emissions (monthly)

P = monthly operating hours (as determined in d)(1)a.)

EF = 1.34 lb PM/ton metal (WebFIRE SCC 30400331)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM2.5 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

d. Emissions Limitation:

Combined VOC emissions for P092 and P095 shall not exceed 15.0 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

VOC = (P) * (EF)

where,

VOC = VOC emissions (monthly)

P = monthly operating hours (determined in d)(1)a.)

EF = 1.20 lb VOC/ton metal (WebFIRE SCC 30400331)

The updated rolling, 12-month summation of the total VOC emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

e. Emission Limitation:

Particulate emissions shall not exceed 12 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

f. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

(3) The permittee shall conduct, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing for P088, P089, P091, P092, P094, P095, P096, P097, and P098 shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. For P088, P089, P089, P091, P092, P094, P095, P096, P097, and P098 the emission testing shall be conducted to demonstrate compliance with the allowable PM concentration of 0.01 gr/dscf in the exhaust stream.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - 40 CFR Part 60, Appendix A, Methods 1 through 5

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

12. Emissions Unit Group -Pouring and Cooling: P091,P094

EU ID	Operations, Property and/or Equipment Description
P091	FBO pouring and cooling line with a 5 ton/hr capacity, capture hood, and vented to sand baghouse
P094	HSP pouring and cooling line with a 5 ton/hr capacity, capture hood, and vented to sand baghouse

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) See b)(1)b. and b)(2)d.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid non-attainment NSR and becoming a major PSD source]	<u>For emissions units P091 and P094:</u> Particulate matter (PM) emissions shall not exceed 1.05 tons per rolling, 12-month summation. Particulate matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.51 tons per rolling, 12-month summation. Particulate matter less than 2.5 microns in diameter (PM2.5) emissions shall not exceed 0.25 tons per rolling, 12-month summation. Volatile organic compound (VOC) emissions shall not exceed 1.75 tons per rolling, 12-month summation. The requirements of this rule also include compliance with 40 CFR Part 63, Subpart EEEEE. See b)(2)a. – c., and c)(1) – (6)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	For PM, PM10, PM2.5, NOx, and SOx emissions see b)(2)a. – c. and c)(1) For VOC emissions see b)(2)c. and c)(1).
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)d.i.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-07(B)	See b)(2e.
e.	OAC rule 3745-17-08(B)	See b)(2)f.
f.	OAC rule 3745-17-11(A)(2)	The emissions limitation established by this rule is less stringent than the requirements established by OAC rule 3745-31-05(A)(3). See b)(2)d.ii.
g.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	PM emissions shall not exceed 0.01 grains per dry standard cubic foot (gr/dscf). See b)(2)g., c)(6), d)(8), e)(5), and f)(2)
h.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a baghouse at all times the emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(D) and 40 CFR Part 63, Subpart EEEEE]

b. The permittee shall use a capture hood with 99% capture efficiency.

c. This Best Available Technology (BAT) emissions limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/08]

d. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, PM10, and PM2.5 emissions from this air contaminant source since the calculated annual emission rate for PM, PM10, and PM2.5 is less than 10 tons/year, taking into account the federally enforceable rule limit of 5,000 operating hours per year, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

ii. Particulate emissions shall not exceed 12 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(ii), as effective 12/01/2006]

e. The emissions units are exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(e).

f. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive emissions from these emissions units.

g. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7720(a) – (c)	General compliance requirements
63.7734(a)(5), (7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7736(d)	Initial compliance with operation and maintenance requirements
63.7743(a)(5)(i), (12), (c)	Continuous compliance for each pouring station
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum amount of metal poured facility-wide shall not exceed 25,000 tons per year based upon a rolling, 12-month summation of the metal pouring rate.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the metal pouring rate levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Metal Pouring Rate
1	2,083
1-2	4,167
1-3	6,250
1-4	8,332
1-5	10,415
1-6	12,498
1-7	14,581
1-8	16,664
1-9	18,747
1-10	20,830
1-11	22,913
1-12	25,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual melt rate limitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The permittee shall employ a bag leak detection system for each negative pressure baghouse or positive pressure baghouse.

[Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and 40 CFR Part 63, Subpart EEEEE]

(3) Each bag leak detection system shall meet the following specifications and requirements:

a. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations or 10 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

b. The bag leak detection system sensor shall provide output of relative PM loadings; and the permittee shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means.

c. The bag leak detection system shall be equipped with an alarm system that will react when the system detects an increase in relative particulate loading over the alarm set point established according to "d" below, and the alarm must be located such that it can be heard by the appropriate plant personnel.

d. During the initial adjustment of the bag leak detection system, at a minimum, the baseline output shall be established by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

e. Except as allowed in "f" below, following the initial adjustment, the averaging period, alarm set point, or alarm delay time shall not be adjusted without approval from the Director.

f. Once per quarter, the sensitivity of the bag leak detection system may be adjusted to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific bag leak detection system monitoring plan.

g. The bag leak detection sensor shall be installed downstream of the fabric filter and upstream of any wet scrubber.

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

[Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and 40 CFR Part 63, Subpart EEEEE]

(4) The permittee shall prepare a site-specific monitoring plan for each bag leak detection system to be incorporated into the operation and maintenance (O&M) plan. The permittee must operate and maintain each bag leak detection system to the plan at all times. Each plan must address all of the items identified below.

a. Installation of the bag leak detection system.

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

c. Operation of the bag leak detection system including quality assurance procedures.

d. Maintenance of the bag leak detection system including routine maintenance schedule and spare parts inventory list.

e. How the bag leak detection system output will be recorded and stored.

f. Procedures for determining what corrective actions are necessary in the event of a bag leak detection alarm.

[Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and 40 CFR Part 63, Subpart EEEEE]

(5) In the event that a bag leak detection system alarm is triggered, the permittee shall initiate corrective action to determine the cause of the alarm within 1-hour of the alarm, initiate corrective action to correct the cause of the problem within 24-hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm.

[Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and 40 CFR Part 63, Subpart EEEEE]

(6) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)
63.7710(b)	Written operation and maintenance plan
63.7733(a)(1), (f)	Establish operating limits
63.7741(b)	Installation, operation, and maintenance for bag leak detection system

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for emissions units P091 and P094:

a. the total metal melted;

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the total metal melted; and

c. the rolling, 12-month summation of PM, PM10, PM2.5, and VOC emissions, in tons based on the calculation in f)(1)a. – b. below.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(2) The pressure drop across the baghouse shall be maintained within the range of 1 to 9 inches of water while the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future

testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(6) The permittee must prepare and operate at all times in according to a written operation and maintenance (O&M) plan for the bag leak detection system associated with P083, P084, P085, and P086. A copy of the O&M plan must be maintained at the facility and made available for review upon request. At a minimum, each plan must contain the following information:

a. general facility and contact information;

b. positions responsible for inspecting, maintaining, and repairing emissions control devices which are employed;

c. description of items, equipment, and conditions that will be inspected, including an inspection schedule for the items, equipment and conditions;

d. identity and estimated quantity of the replacement parts that will be maintained in inventory; and

e. the specification and requirements contained in Section c)(4) above.

[Authority for term: OAC rule 3745-77-07(C), OAC rule 3745-31-05(D), and 40 CFR Part 63, Subpart EEEEE]

(7) In the event that a bag leak detection system alarm is triggered, the permittee shall record the following information:

a. date and time of each valid alarm;

b. the time the permittee initiated corrective action;

c. the corrective action taken; and

d. the date on which corrective action was completed.

[Authority for term: OAC rule 3745-77-07(C), OAC rule 3745-31-05(D), and 40 CFR Part 63, Subpart EEEEE]

(8) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7740(c)	Monitoring requirements for baghouse.
63.7742	Monitoring and collection of data to demonstrate continuous compliance
63.7747(b) – (d)	Request alternative monitoring requirements for a continuous emissions monitoring system
63.7752(a), (c)	Recordkeeping
63.7753	What form records must be kept in and for how long

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all exceedances of the rolling, 12-month summation of PM, PM10, PM2.5, and VOC emissions;

b. all exceedances of the rolling, 12-month limitation on the metal melt rate for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative metal melt rate;

c. each period of time (start time and date, end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

d. any period of time (start time and date, end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

e. each incident of deviation in e)(2)c. and/or e)(2)d. where a prompt investigation was not conducted;

f. each incident of deviation described in e)(2)c. and/or e)(2)d. where a prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

g. each incident of deviation described in e)(2)c. and/or e)(2)d. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall also submit annual reports that specify the total PM and PM10 emissions from this emissions unit. This report shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PM emissions for P091 and P094 shall not exceed 1.05 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equations:

Pouring PM = (P) * (EF) * (CE)

where,

Pouring PM = PM emissions from pouring (monthly)

P = monthly metal melt rate, ton/month (as determined in d)(1)a.)

EF = 4.2 lb PM/ton metal (WebFIRE, SCC 30400320)

CE = control efficiency (99%, PTI application A0052199)

Cooling PM = (P) * (EF) * (CE)

where,

Pouring PM = PM emissions from cooling (monthly)

P = monthly metal melt rate, ton/month (as determined in d)(1)a.)

EF = 4.2 lb PM/ton metal (WebFIRE, SCC 30400318)

CE = control efficiency (99%, PTI application A0052199)

Monthly emissions shall be determined by summing the cooling and pouring emissions.

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

b. Emissions Limitation:

PM10 emissions for P091 and P094 shall not exceed 0.51 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equations:

Pouring PM10 = (P) * (EF) * (CE)

where,

Pouring PM10 = PM10 emissions from pouring (monthly)

P = monthly metal melt rate, ton/month (as determined in d)(1)a.)

EF = 2.06 lb PM10/ton metal (WebFIRE, SCC 30400320)

CE = control efficiency (99%, PTI application A0052199)

Cooling PM10 = (P) * (EF) * (CE)

where,

Pouring PM10 = PM10 emissions from cooling (monthly)

P = monthly metal melt rate, ton/month (as determined in d)(1)a.)

EF = 2.06 lb PM10/ton metal (WebFIRE, SCC 30400318)

CE = control efficiency (99%, PTI application A0052199)

Monthly emissions shall be determined by summing the cooling and pouring emissions.

The updated rolling, 12-month summation of the total PM10 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

c. Emissions Limitation:

PM2.5 emissions for P091 and P094 shall not exceed 0.25 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equations:

Pouring PM2.5 = (P) * (EF) * (CE)

where,

Pouring PM2.5 = PM2.5 emissions from pouring (monthly)

P = monthly metal melt rate, ton/month (as determined in d)(1)a.)

EF = 1.00 lb PM2.5/ton metal (WebFIRE, SCC 30400320)

CE = control efficiency (99%, PTI application A0052199)

Cooling PM2.5 = (P) * (EF) * (CE)

where,

Pouring PM2.5 = PM2.5 emissions from cooling (monthly)

P = monthly metal melt rate, ton/month (as determined in d)(1)a.)

EF = 1.00 lb PM2.5/ton metal (WebFIRE, SCC 30400318)

CE = control efficiency (99%, PTI application A0052199)

Monthly emissions shall be determined by summing the cooling and pouring emissions.

The updated rolling, 12-month summation of the total PM2.5 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

d. Emissions Limitation:

VOC emissions for P091 and P094 shall not exceed 1.75 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

VOC = (P) * (EF)

where,

VOC = VOC emissions (monthly)

P = monthly operating hours (determined in d)(1)a.)

EF = 0.14 lb VOC/ton metal (WebFIRE, SCC 30400320)

The updated rolling, 12-month summation of the total VOC emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

e. Emission Limitation:

Particulate emissions shall not exceed 12 pounds per hour

Applicable Compliance Method:

The emission limitation was established by “Table I” in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

f. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(a), (b)	When to conduct subsequent performance tests
63.7732(a), (b), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

(3) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing for P088, P089, P091, P092, P094, P095, P096, P097, and P098 shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. For P088, P089, P089, P091, P092, P094, P095, P096, P097, and P098 the emission testing shall be conducted to demonstrate compliance with the allowable PM concentration of 0.01 gr/dscf in the exhaust stream.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - 40 CFR Part 60, Appendix A, Methods 1 through 5

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA, Central District Office. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in

Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

f. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.

13. Emissions Unit Group -Tumbleblast: P104,P105,P106

EU ID	Operations, Property and/or Equipment Description
P104	#1 14 cubic ft Tumbleblast (wheelabrator) with a design capacity of 2 tons metal casting/hour. Vents to C&F collector.
P105	#2 14 cubic ft Tumbleblast (wheelabrator) with a design capacity of 2 tons metal casting/hour. Vents to C&F collector.
P106	28 cubic ft tumbleblast (wheelabrator) with a design capacity of 4 tons metal casting/hr. Vents to C&F collector.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) See b)(1)b. and b)(2)c.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid becoming a major PSD source]	<u>For emissions units P104, P105, and P106:</u> Particulate matter (PM) emissions shall not exceed 5.1 tons per rolling, 12-month summation. Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.51 tons per rolling, 12-month summation. See b)(2)a. – b.
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/08	For PM and PM10 emissions see b)(2)b. – c. and c)(1)
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	For PM and PM10 emissions see b)(2)d.i.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-07(B)(1)	See b)(2)e.
f.	OAC rule 3745-17-08(B)	See b)(2)f.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-17-11(A)(2)	The emission limitation established by this rule is less stringent than the requirements in OAC rule 3745-31-05(A)(3). See b)(2)d.ii.
g.	40 CFR Part 63, Subpart EEEEE [In accordance with 40 CFR 63.7682 this facility is an existing iron foundry subject to the emission limitations/control measures specified in this section]	For each building or structure housing any iron foundry emissions source at the iron foundry, you must not discharge any fugitive emissions that exhibit opacity greater than 20% (6-minute average), except for one 6-minute average per hour that does not exceed 27% opacity. See b)(2)g., c)(2), d)(5), e)(5), and f)(2)
h.	40 CFR Part 63, Subpart A	Table I of 40 CFR Part 63, Subpart EEEEE, *Applicability of General Provisions to Subpart EEEEE* identifies which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a baghouse at all times the emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(D)]

b. The baghouse serving the emissions unit shall achieve an overall control efficiency of 98.5%.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule ORC 3704.03(T)]

c. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 06/30/08]

d. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM and PM10 emissions from this air contaminant source since the calculated annual emission rate for

PM10 is less than 10 tons/year, taking into account the federally enforceable rule limit of 5,000 operating hours per year, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

ii. Particulate emissions shall not exceed 16.5 pounds per hour.

[Authority for term: OAC rule 3745-31-05(A)(3)(ii), as effective 06/30/08]

e. The emissions units are exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(e).

f. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive emissions from these emissions units.

g. The permittee shall comply with the applicable requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7734(a)(7)	Initial compliance demonstration for fugitive emissions from foundry operations
63.7743(a)(7), (12)	Continuous compliance with the fugitive emissions limitation
63.7746	Other requirements to demonstrate continuous compliance
63.7760	Other requirements and information
63.7761	Other requirements and information

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

c) Operational Restrictions

(1) The maximum operating time for P104, P105, and P106 shall not exceed 5,000 hours per year based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Operating Hours
1	417
1-2	833
1-3	1,250
1-4	1,667
1-5	2,083
1-6	2,500
1-7	2,917

1-8	3,333
1-9	3,750
1-10	4,167
1-11	4,583
1-12	5,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D)]

(2) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7710(a)	Operational and maintenance (general)

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for P104, P105, and P106:

a. the rolling, 12-month summation of PM and PM10 emissions, in tons based on the calculation in f)(1)a. – b. below.

b. the operating hours for each month; and

c. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(2) The pressure drop across the baghouse shall be maintained within the range of 1 to 8 inches of water while the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring

equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-31-05(D)]

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7752(a), (c)	Recordkeeping.
63.7753	What form records must be kept in and how long.

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for P104, P105, and P106:

a. all exceedances of the rolling, 12-month summation of PM and PM10 emissions;

b. all exceedances of the rolling, 12-month limitation on the hours of operation for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation;

c. each period of time (start time and date, end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

d. any period of time (start time and date, end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

e. each incident of deviation in e)(2)c. and/or e)(2)d. where a prompt investigation was not conducted;

f. each incident of deviation described in e)(2)c. and/or e)(2)d. where a prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

g. each incident of deviation described in e)(2)c. and/or e)(2)d. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-31-05(D)]

(3) The permittee shall also submit annual reports that specify the total PM and PM10 emissions from this emissions unit. This report shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-17-07(A)(1)]

(5) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart EEEEE.

63.7746	Reporting requirements for deviations
63.7750	What notifications must be submitted and when
63.7751	What reports must be submitted and when

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PM emissions for P104, P105, and P106 shall not exceed 5.1 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM = (P) * (EF) * (CE)

where,

PM = PM emissions (monthly)

P = monthly operating hours (as determined in d)(1)b.)

EF = 17 lb PM/ton metal (WebFIRE, SCC 30400340)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

b. Emissions Limitation:

PM10 emissions for P104, P105, and P106 shall not exceed 0.51 ton per rolling, 12-month summation

Applicable Compliance Method:

The monthly emissions shall be based on the following equation:

PM10 = (P) * (EF) * (CE)

where,

PM10 = PM10 emissions (monthly)

P = monthly operating hours (determined in d)(1)b.)

EF = 1.7 lb PM10/ton metal (WebFIRE, SCC 30400340)

CE = control efficiency (99%, PTI application A0052199)

The updated rolling, 12-month summation of the total PM10 emissions shall include the information for the current month and the preceding eleven calendar months.

[Authority for term: OAC rule3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

c. Emission Limitation:

Particulate emissions shall not exceed 16.5 pounds per hour

Applicable Compliance Method:

The emission limitation was established by "Table I" in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-11(A)(2)]

d. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(A)(1)]

(2) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with under 40 CFR Part 63, Subpart EEEEE.

63.7730	Initial compliance requirements
63.7731(b)	When to conduct subsequent performance tests
63.7732(a), (d)	Test methods used and other procedures to demonstrate initial compliance with the emissions limitations

[Authority for term: 40 CFR Part 63, Subpart EEEEE]

(3) The permittee shall conduct, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing for P104, P105, P106, and P107, shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. For P104, P105, P106, and P107 the emission testing shall be conducted to demonstrate compliance with the overall control efficiency of 98.5%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - 40 CFR Part 60, Appendix A, Methods 1 through 5

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA, Central District Office. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

f. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(D)]

g) Miscellaneous Requirements

(1) None.