



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

7/31/2015

Certified Mail

Kelly Garrett
 FISHER CAST STEEL
 6 W. Town St
 West Jefferson, OH 43162

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0149000002
 Permit Number: P0117755
 Permit Type: Initial Installation
 County: Madison

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) 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 Madison Press. 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 and Ohio EPA DAPC, Central District Office
 Permit Review/Development Section 50 West Town Street, 6th Floor
 Ohio EPA, DAPC P.O. Box 1049
 50 West Town Street Suite 700 Columbus, OH 43216-1049
 PO Box 1049
 Columbus, Ohio 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 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,

Michael E. Hopkins, P.E.
 Assistant Chief, Permitting Section, DAPC

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

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: <http://epa.ohio.gov/actions.aspx> or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email: HClerk@epa.ohio.gov

Draft Air Pollution Permit-to-Install and Operate Initial Installation
FISHER CAST STEEL

12 TOWN ST., West Jefferson, OH 43162

ID#:P0117755

Date of Action: 7/31/2015

Permit Desc: Initial installation permit for foundry operations including mold making, mold wash, charge handling, pouring & cooling, shakeout, finishing and sand storage..

The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the ID # or: Jason Fister, Ohio EPA DAPC, Central District Office, 50 West Town Street, 6th Floor P.O. Box 1049, Columbus, OH 43216-1049. Ph: (614)728-3778



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Fisher Cast Steel is a stainless steel foundry located in West Jefferson, Ohio in Madison County. This permit is being issued as an installation permit; however, all of the emissions units have already been installed. The facility has previously received permits for the sand reclamation dryer (P002) and the associated sand reclamation silo (P003). Because the foundry produces stainless steel, no recycled/scrap metal is used as raw material. The facility is considered an area source for HAPs and is subject to 40 CFR Part 63, Subpart ZZZZZ. The table below demonstrates that the facility-wide pte for all pollutants remains below the major source threshold for both Title V and NANSR applicability and includes sources that are not subject to Ohio's installation and operating permit program.

3. Facility Emissions and Attainment Status:

Madison County is designated as "Non-Attainment" for the 2008, 8-hour ozone standard. This permitting action represents the initial installation permit for sources that have already been installed and/or modified and does not include an evaluation for NANSR applicability prior to this permitting action. As a result of this permit and the modification permit for emissions units P002 and P003 (P0117595) the facility pte will remain below the 100 tpy major source threshold for Title V and NANSR applicability for all pollutants.

Process	Potential to Emit						
	Tons / Year						
	PE	SO ₂	NO _x	VOC	CO	PM ₁₀	PM _{2.5}
Heat Treat Furnace #1	0.07	0.01	0.86	0.05	0.72	0.07	0.07
Heat Treat Furnace #2	0.07	0.01	0.86	0.05	0.72	0.07	0.07
F001 - Mold Sand Mixer - Large	6.50	0	0	38.0	0	5.50	2.00
F002 - Core Sand Mixer	1.63	0	0	7.93	0	1.38	0.50
F003 - Mold Sand Mixer - Small	1.63	0	0	6.35	0	1.38	0.50
F009 - Charge Handling	4.34	0	0	0	0	2.60	2.60
F004 - Pouring & Cooling	20.24	0.14	0.07	1.01	28.91	9.90	4.84
F006 - Shakeout	23.13	0	0	8.67	7.23	16.19	9.68
F005 - Wheelabrator - Tableblast	2.98	0	0	0	0	0.75	0.75
F007 - TumbleblastShotblast Units (2)	0.75	0	0	0	0	0.75	0.75
P002 - Thermal Sand Reclaimer	4.14	0	8.45	6.98	46.90	4.14	4.14
P003 - Reclaimed Sand Handling	5.65	0	0	0	0	4.12	3.95
F010 - Mold Supply Silos (Rec. & New)	0.75	0	0	0	0	0.75	0.75
F008 - Mold/Core Wash	0	0	0	13.41	0	0	0
EIF #1	0.39	0	0	0	0	0.35	0.35

EIF #2	0.19	0	0	0	0	0.17	0.17
EIF #3	0.14	0	0	0	0	0.13	0.13
Emergency Generator	0	0	0.01	0	0.02	0	0
TOTAL	72.6	0.16	10.25	82.45	84.5	48.25	31.25

The facility is accepting synthetic minor restrictions for the mold making operations (F001, F002, and F003) and for the sand reclamation dryer (P002) for the purpose of avoiding Title V and NANSR applicability for VOC emissions (without restrictions, the facility-wide pte for VOC emissions is 143.28 tpy). Although the synthetic minor restrictions will also limit individual and combined HAP emissions from these sources, the facility-wide pte for individual and combined HAPs remain below the applicable Title V and MACT thresholds without applying the restrictions [the unrestricted pte for the highest individual HAP (naphthalene) is 7.36 tpy and for combined HAPs is 18.37 tpy].

Naphthalene emissions from the mold making operations (F001, F002, and F003) were evaluated for compliance with Ohio's Air Toxics Policy. Screen3 modeling was provided that demonstrates that the Naphthalene emissions from the individual and combined mold making processes do not exceed the maximum acceptable ground level concentration (MAGLC). All other emissions units that emit toxic air pollutants emit less than 1 tpy of each applicable pollutant.

4. Source Emissions:

Most foundry sources have large individual capabilities but are limited in some manner by either the supply of sand or the supply of poured metal. It is reasonable to expect that there is a rather constant ratio of sand used to metal poured at a given facility if the size and nature of the castings are relatively similar over time. For this permit, short-term emissions limitations were determined based on the individual capability of a given emissions unit and long-term emissions limitations were determined using either the maximum amount of metal that can be poured or the maximum amount of sand utilized by the mold makers. The maximum combined metal pouring capabilities of the three electric induction furnaces are 1.65 tons metal per hour and 14,454 tons metal per year. The mold makers are restricted to a total of 30,000 tons of sand per year. Unless otherwise stated, these values were used to assign the long-term emissions limitations.

F001 – Large Mold Sand Mixer

Sand usage is restricted to 20,000 tons per rolling, 12-month period for the purpose of avoiding Title V applicability; therefore, corresponding rolling, 12-month PM₁₀, PM_{2.5} and VOC emissions limitations have been established.

Source was installed/last modified in 2012; therefore BAT was assigned in accordance with post SB265 guidance.

$$PM_{10} = 20,000 \text{ tons sand} * 0.55 \text{ lb } PM_{10}/\text{ton sand} = 5.50 \text{ tpy}$$

$$PM_{2.5} = 20,000 \text{ tons sand} * 0.20 \text{ lb } PM_{2.5}/\text{ton sand} = 2.0 \text{ tpy}$$

$$VOC = 20,000 \text{ tons sand} * 0.012 \text{ tons resin}/\text{ton sand} = 240 \text{ tons resin}$$

$$240 \text{ tons resin} * 0.10 \text{ tons catalyst}/\text{ton resin} = 24 \text{ tons catalyst}$$

$$20,000 \text{ tons sand} * 1.40 \text{ lbs VOC}/\text{ton resin} = 14.0 \text{ tons VOC from resin}$$

$$24 \text{ tons catalyst (100\% VOC)} = 24.0 \text{ ton VOC from catalyst}$$

$$\text{Total VOC} = 14.0 \text{ tons} + 24.0 \text{ tons} = 38.0 \text{ tons}$$

F002 – Small Mold Sand Mixer

Sand usage is restricted to 5,000 tons per rolling, 12-month period for the purpose of avoiding Title V applicability; therefore, corresponding rolling, 12-month PM₁₀, PM_{2.5} and VOC emissions limitations have been established.

Source was installed/last modified in 2004; therefore BAT was assigned in accordance with pre SB265 guidance.

$$\text{PE} = 6 \text{ tons sand/hour} * 0.65 \text{ lb PE/ton sand} = 3.90 \text{ lb PE/hr} \& 5,000 \text{ tpy} * 0.65 \text{ lb PE/ton sand} = 1.63 \text{ tpy PE}$$

$$\text{PM}_{10} = 5,000 \text{ tons sand} * 0.55 \text{ lb PM}_{10}/\text{ton sand} = 1.38 \text{ tpy}$$

$$\text{PM}_{2.5} = 5,000 \text{ tons sand} * 0.20 \text{ lb PM}_{2.5}/\text{ton sand} = 0.50 \text{ tpy}$$

$$\text{VOC} = 6 \text{ tons sand/hr} * 1.17 \text{ lbs VOC/ton resin} = 7.02 \text{ lbs/hr VOC from resin}$$

$$6 \text{ tons sand/hr} * 0.010 \text{ tons resin/ton sand} = 0.06 \text{ tons resin/hr}$$

$$0.06 \text{ tons resin/hr} * 0.10 \text{ tons catalyst/ton resin} = 0.006 \text{ tons catalyst}$$

$$0.006 \text{ tons catalyst (100\% VOC)} = 12 \text{ lbs/hr from catalyst}$$

$$\text{Total VOC} = 7.02 \text{ tons} + 12 \text{ tons} = 19.02 \text{ lbs VOC/hr}$$

$$\text{VOC} = 5,000 \text{ tons sand} * 0.010 \text{ tons resin/ton sand} = 50 \text{ tons resin}$$

$$50 \text{ tons resin} * 0.10 \text{ tons catalyst/ton resin} = 5 \text{ tons catalyst}$$

$$5,000 \text{ tons sand} * 1.17 \text{ lbs VOC/ton resin} = 2.93 \text{ tons VOC from resin}$$

$$5 \text{ tons catalyst (100\% VOC)} = 5 \text{ ton VOC from catalyst}$$

$$\text{Total VOC} = 2.93 \text{ tons} + 5 \text{ tons} = 7.93 \text{ tons}$$

F003 – Core Sand Mixer

Sand usage is restricted to 5,000 tons per rolling, 12-month period for the purpose of avoiding Title V applicability; therefore, corresponding rolling, 12-month PM₁₀, PM_{2.5} and VOC emissions limitations have been established.

Source was installed/last modified in 2011; therefore BAT was assigned in accordance with post SB265 guidance.

$$\text{PM}_{10} = 5,000 \text{ tons sand} * 0.55 \text{ lb PM}_{10}/\text{ton sand} = 1.38 \text{ tpy}$$

$$\text{PM}_{2.5} = 5,000 \text{ tons sand} * 0.20 \text{ lb PM}_{2.5}/\text{ton sand} = 0.50 \text{ tpy}$$

$$\text{VOC} = 5,000 \text{ tons sand} * 0.008 \text{ tons resin/ton sand} = 40 \text{ tons resin}$$

$$40 \text{ tons resin} * 0.10 \text{ tons catalyst/ton resin} = 4 \text{ tons catalyst}$$

$$5,000 \text{ tons sand} * 0.94 \text{ lbs VOC/ton resin} = 2.35 \text{ tons VOC from resin}$$

$$5 \text{ tons catalyst (100\% VOC)} = 4 \text{ ton VOC from catalyst}$$

$$\text{Total VOC} = 2.35 \text{ tons} + 4 \text{ tons} = 6.35 \text{ tons}$$

F004 – Pouring and Colling

Source was installed/last modified in 2011; therefore BAT was assigned in accordance with post SB265 guidance.

$$\text{NO}_x = 14,454 \text{ tons metal/r12m period} * 0.01 \text{ lb NO}_x/\text{ton metal} = 0.07 \text{ tons NO}_x/\text{r12m period}$$

$$\text{SO}_2 = 14,454 \text{ tons metal/r12m period} * 0.02 \text{ lb SO}_2/\text{ton metal} = 0.14 \text{ tons SO}_2/\text{r12m period}$$

$$\text{CO} = 14,454 \text{ tons metal/r12m period} * 4.0 \text{ lb CO/ton metal} = 28.91 \text{ tons CO/r12m period}$$

$$\text{VOC} = 14,454 \text{ tons metal/r12m period} * 0.14 \text{ lb VOC/ton metal} = 1.01 \text{ tons VOC/r12m period}$$

$$\text{OAC rule 3745-18-06 SO}_2 \text{ calculation (1.64 T/hr): AER} = 30(1.64)^{0.67} = 41.79$$

F005 – Wheelabrator - Tableblast

Source was installed/last modified in 1966; therefore BAT is not assigned.

OAC rule 3745-17-11(B)(1) limitation assigned in accordance with Figure II and uncontrolled mass rate of emissions (UMRE). Operation of the baghouse is necessary for compliance with the rule limitation.

UMRE = 4 tons metal/hr * 17.0 lb PE/ton metal = 68.0 lb PE/hr
Figure II calculation: $A = 0.5782(68)^{0.6458} = 8.82$ lb PE/hr

F006 – Shakeout

Source was installed/last modified in 1998; therefore BAT was assigned in accordance with pre SB265 guidance.

PE = 1.65 tons metal/hr * 3.20 lbs PE/ton metal = 5.28 lb PE/hr
PE = 14,454 tons metal/yr * 3.20 lbs PE/ton metal = 23.13 tpy PE
VOC = 1.65 tons metal/hr * 1.20 lbs VOC/ton metal = 1.98 lb VOC/hr
VOC = 14,454 tons metal/yr * 1.20 lbs VOC/ton metal = 8.67 tpy VOC
CO = 1.65 tons metal/hr * 1.0 lbs CO/ton metal = 1.65 lb CO/hr
CO = 14,454 tons metal/yr * 1.0 lbs CO/ton metal = 7.23 tpy CO

F007 – Tumblast Units

Source was installed/last modified in 1996; therefore BAT was assigned in accordance with pre SB265 guidance.

PE = 0.01 gr/dscf * 60min/hr * 1lb/7,000gr * 2,000acf/min * 8,760hr/yr * 1ton/2,000lb = 0.75 tpy PE

F008 – Mold/Core Wash

Source was installed/last modified in 1998; therefore BAT was assigned in accordance with pre SB265 guidance.

VOC = 33.0 tons sand/hr * 0.0037 = 0.1221 tons coating/hr
0.1221 ton coating/hr (30% VOC) = 73.26 lb/hr VOC from coating
33.0 tons sand/hr * 0.00038 = 0.01254 tons solvent/hr
0.01254 tons solvent/hr (100% VOC) = 25.08 lb/hr VOC from solvent
Total uncontrolled VOC = 73.26 lb/hr + 25.08 lb/hr = 98.34 lb VOC/hr
Controlled VOC = 98.34 lb VOC/hr * (1 - 70%) = 29.51 lb VOC/hr

30,000 tons sand/yr * 0.0037 = 111 tons coating/yr
111 tons coating/yr (30% VOC) = 33.3 tpy VOC from coating
30,000 tons sand/yr * 0.00038 = 11.4 tons solvent/yr
11.4 tons solvent/yr (100% VOC) = 11.4 tpy VOC from solvent
Total uncontrolled VOC = 33.3 tpy + 11.4 tpy = 44.7 tpy VOC
Controlled VOC = 44.7 tpy VOC * (1 - 70%) = 13.41

F009 – Charge Handling

Source was installed/last modified in 1998; therefore BAT was assigned in accordance with pre SB265 guidance.

$$\begin{aligned} \text{PE} &= 1.65 \text{ tons metal/hr} * 0.60 \text{ lbs PE/ton metal} = 0.99 \text{ lb PE/hr} \\ \text{PE} &= 14,454 \text{ tons metal/yr} * 0.60 \text{ lbs PE/ton metal} = 4.34 \text{ tpy PE} \end{aligned}$$

F010 – Mold Supply Silo

Source was installed/last modified in 1998; therefore BAT was assigned in accordance with pre SB265 guidance.

$$\text{PE} = 0.01 \text{ gr/dscf} * 60 \text{ min/hr} * 1 \text{ lb/7,000gr} * 2,000 \text{ acf/min} * 8,760 \text{ hr/yr} * 1 \text{ ton/2,000lb} = 0.75 \text{ tpy PE}$$

5. Conclusion:

The terms and conditions contained within PTI P0117755 are sufficient to ensure compliance with all state and federal regulations.

6. Please provide additional notes or comments as necessary:

None

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	69.23
SO ₂	0.14
NO _x	8.52
VOC	82.35
CO	83.04
PM ₁₀	47.46
PM _{2.5}	30.46



DRAFT

**Division of Air Pollution Control
Permit-to-Install and Operate
for
FISHER CAST STEEL**

Facility ID:	0149000002
Permit Number:	P0117755
Permit Type:	Initial Installation
Issued:	7/31/2015
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install and Operate
for
FISHER CAST STEEL

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Draft Permit-to-Install and Operate

FISHER CAST STEEL

Permit Number: P0117755

Facility ID: 0149000002

Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0149000002
Application Number(s): A0051665, A0053448
Permit Number: P0117755
Permit Description: Initial installation permit for foundry operations including mold making, mold wash, charge handling, pouring & cooling, shakeout, finishing and sand storage.
Permit Type: Initial Installation
Permit Fee: \$14,400.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 7/31/2015
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

FISHER CAST STEEL
12 TOWN ST
West Jefferson, OH 43162

of a Permit-to-Install and Operate 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 this Permit-to-Install and Operate for the air contaminant source(s) (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 described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director



Authorization (continued)

Permit Number: P0117755
Permit Description: Initial installation permit for foundry operations including mold making, mold wash, charge handling, pouring & cooling, shakeout, finishing and sand storage.

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

- Emissions Unit ID: F001**
Company Equipment ID: Large Mold Sand Mixer
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F002**
Company Equipment ID: Sm Mold Sand Mixer
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F003**
Company Equipment ID: Core Sand Mixer
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F004**
Company Equipment ID: Pouring and Cooling
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F005**
Company Equipment ID: Wheelabrator - Table Blast
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F006**
Company Equipment ID: Shakeout
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F007**
Company Equipment ID: Tumblast Units
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F008**
Company Equipment ID: Mold/Core Wash
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F009**
Company Equipment ID: Charge Handling
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F010**
Company Equipment ID: Mold Supply Silo
Superseded Permit Number:
General Permit Category and Type: Not Applicable



Draft Permit-to-Install and Operate
FISHER CAST STEEL
Permit Number: P0117755
Facility ID: 0149000002
Effective Date: To be entered upon final issuance

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Central District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



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B. Facility-Wide Terms and Conditions



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The permittee is advised that this facility may be subject to the "Generally Available Control Technology" (GACT) requirements under Title 40 of the Code of Regulations, Part 63, Subpart ZZZZZ, the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries Area Sources. At this time the Ohio EPA is not accepting the delegating authority to enforce the standards promulgated under the Urban Air Toxics Strategy. The requirements of this rule, that are applicable to the area source(s) (for hazardous air pollutants) identified in this permit, shall be enforceable by U.S. EPA. Region 5. The complete requirements of this Subpart (including the Part 63 General Provisions) may be accessed via the Internet from the Electronic code of Federal Regulations (e-CFR) website <http://www.ecfr.gov/> or by contacting the appropriate Ohio EPA District Office or Local Air Agency.



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Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions

1. F001, Large Mold Sand Mixer

Operations, Property and/or Equipment Description:

Large Mold Sand Mixer (Mold Making)

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)f., d)(2) through d(5), and e)(3)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)c., c)(1), d)(1), e)(4), 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) <i>June 30, 2008</i>	The volatile organic compound (VOC), particulate matter less than 10 microns in aerodynamic diameter (PM ₁₀), and particulate matter less than 2.5 microns in aerodynamic diameter (PM _{2.5}) emissions established by this rule are equivalent to the limitations established pursuant to OAC rule 3745-31-05(D). See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) <i>June 30, 2008</i>	See b)(2)b.
c.	OAC rule 3745-31-05(D) (Synthetic Minot to avoid Title V)	VOC emissions shall not exceed 38.0 tons per rolling, 12-month period. PM ₁₀ emissions shall not exceed 5.50 tons per rolling, 12-month period. PM _{2.5} emissions shall not exceed 2.0 tons



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		per rolling, 12-month period.
d.	OAC rule 3745-17-07(B)(1)	See b)(2)c.
e.	OAC rule 3745-17-08(B)	See b)(2)d.
f.	ORC 3704.03(F)	See d)(2) through d)(5) and e)(3)

(2) Additional Terms and Conditions

- a. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that Best Available Technology (BAT) is no longer required by state regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, paragraph (A)(3)(a)(ii) of OAC rule 3745-31-05 (the less than 10 tons per year BAT exemption) has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revisions to OAC rule 3745-31-05(A)(3)(a)(ii), the requirement to satisfy BAT for pollutant(s) less than 10 tons per year still exists as part of the federally-approved SIP.
- b. The following rule paragraph will apply when 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 BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM₁₀ and PM_{2.5} emissions from this air contaminant source because the uncontrolled potential to emit for each pollutant is less than 10 tons/year.
- c. This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- d. This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

c) Operational Restrictions

- (1) Sand throughput for this emissions unit shall not exceed 20,000 tons per rolling, 12-month period.

The permittee has existing records of the sand throughput; therefore, the first year of accumulating monthly sand throughput limitations is not necessary.

d) Monitoring and/or Recordkeeping Requirements

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

- a. The name and identification of each binder component (e.g., resin, catalyst, etc.);
 - b. The quantity of each binder component used;
 - c. The VOC content of each binder component;
 - d. The monthly VOC emissions from all binder components [determined in accordance with f)(1)c.];
 - e. The total rolling, 12-month VOC emissions;
 - f. The monthly sand throughput;
 - g. The rolling, 12-month sand throughput;
 - h. The rolling, 12-month PM₁₀ emissions [determined in accordance with f)(1)a.]; and
 - i. The rolling, 12-month PM_{2.5} emissions [determined in accordance with f)(1)b.];
- (2) The PTIO application for this/these emissions unit(s), F001, F002, and F003, was evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these 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, AERMOD, or ISCST3, or other Ohio EPA approved model. 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., “X” is 24 hours per day and “Y” is 7 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):

$$\text{TLV}/10 \times 8/\text{X} \times 5/\text{Y} = 4 \text{ TLV}/\text{XY} = \text{MAGLC}$$

- 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: Napthalene

TLV (mg/m³): 52.43

Maximum Hourly Emission Rate (lbs/hr): 8.52 (combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 350.7 (combined)

MAGLC (ug/m³): 1248.3

The permittee, has demonstrated that emissions of Napthalene, from emissions unit(s) F001, F002, and F003, 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).

- (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 PTIO 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.

- (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.
 - (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.
- e) Reporting Requirements
- (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- (4) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each rolling, 12-month period when the sand throughput limitation of 20,000 tons was exceeded.

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. Emissions limitation:

PM₁₀ emissions shall not exceed 5.50 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month limitation shall be demonstrated by multiplying the actual rolling, 12-month sand throughput required by d)(1) by an emissions factor of 0.55 lbs PM₁₀/ton sand and then converting to tons by dividing by 2,000. The emissions factor was derived by adding the core sand and binder mixing emissions factor and the core making emissions factor for particulate emissions from Ohio's reasonably available control measures (RACM)



document table 2.7-1. The emissions factor was then reduced according to US EPA's PM calculator for the appropriate SCC code (85%).

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

b. Emissions limitation:

PM_{2.5} emissions shall not exceed 2.0 tons per rolling, 12-month period [as applicable prior to U.S. EPA approving OAC rule 3745-31-05(A)(3)(a)(ii) as part of the SIP].

Applicable Compliance Method:

Compliance with the rolling, 12-month limitation shall be demonstrated by multiplying the actual rolling, 12-month sand throughput required by d)(1) by an emissions factor of 0.20 lbs PM_{2.5}/ton sand and then converting to tons by dividing by 2,000. The emissions factor was derived by adding the core sand and binder mixing emissions factor and the core making emissions factor for particulate emissions from Ohio's reasonably available control measures (RACM) document table 2.7-1. The emissions factor was then reduced according to US EPA's PM calculator for the appropriate SCC code (30%).

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

c. Emissions limitation:

VOC emissions shall not exceed 38.0 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the VOC emissions limitation is determined through the recordkeeping requirements established in d)(1) and the following calculation:

$$VOC = VOC_R + VOC_C$$

Where,

VOC_R = the VOC emissions from resin usage; and

VOC_C = the VOC emissions from catalyst usage;

Where,

VOC_R = resin usage (tons) * 1.40[#]; and

VOC_C = catalyst usage (tons) * (V_C);



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Where,

V_C = the VOC content of the catalyst, in percent by weight;

#The resin emissions factor was published in the Ohio Cast Metals Association (OCMA) OCMA Report and Recommendations Concerning Laboratory Testing Results of Foundry Binder Systems for Core and Mold Making and is corrected to the emissions unit specific proportion of resin to sand usage. For this emissions unit, the proportion of resin to sand usage is 1.2% by weight; therefore, the published emissions factor 1.17 lbs VOC/ton of sand is corrected by multiplying by (1.2%/1.0%) resulting in an emissions unit specific emissions factor of 1.40 lbs VOC/ton of sand.

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

g) Miscellaneous Requirements

(1) None.

2. F002, Sm Mold Sand Mixer

Operations, Property and/or Equipment Description:

Small Line Mold Sand Mixer (Mold Making)

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)e., d)(4) through d)(7), and e)(3)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)b., c)(1), d)(2), e)(4), and f)(1)c. through f)(1)e.
- 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	Particulate emissions (PE) shall not exceed 3.90 pounds per hour (lb/hr) and 1.63 tons per year (tpy). Volatile organic compound (VOC) emissions shall not exceed 19.02 lb/hr. There shall be no visible emissions of fugitive dust from the egress points adjacent to this emissions unit.
b.	OAC rule 3745-31-05(D) (Synthetic Minot to avoid Title V)	VOC emissions shall not exceed 7.93 tons per rolling, 12-month period. PM ₁₀ emissions shall not exceed 1.38 tons per rolling, 12-month period. PM _{2.5} emissions shall not exceed 0.50 tons per rolling, 12-month period.
c.	OAC rule 3745-17-07(B)(1)	See b)(2)a.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-08(B)	See b)(2)b.
e.	ORC 3704.03(F)	See d)(4) through d)(7) and e)(3)

(2) Additional Terms and Conditions

- a. This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- b. This facility is not located within the areas identified in “Appendix A” of OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

c) Operational Restrictions

- (1) Sand throughput for this emissions unit shall not exceed 5,000 tons per rolling, 12-month period.

The permittee has existing records of the sand throughput; therefore, the first year of accumulating monthly sand throughput limitations is not necessary.

d) Monitoring and/or Recordkeeping Requirements

- (1) The hourly and annual PE limitations were established to reflect the potential to emit for each pollutant taking into consideration the maximum hourly and annual sand throughput (6.0 tons/hr and 5,000 tons/yr). Therefore, it is not necessary to develop monitoring or recordkeeping requirements to ensure compliance with these limitations; however, some records may still be necessary in order to satisfy fee emissions reporting requirements.

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

- a. The name and identification of each binder component (e.g., resin, catalyst, etc.);
- b. The quantity of each binder component used;
- c. The VOC content of each binder component;
- d. The monthly VOC emissions from all binder components [determined in accordance with f)(1)c.];
- e. The total rolling, 12-month VOC emissions;
- f. The monthly sand throughput;
- g. The rolling, 12-month sand throughput;

- 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., “X” is 24 hours per day and “Y” is 7 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):

$$\text{TLV}/10 \times 8/\text{X} \times 5/\text{Y} = 4 \text{ TLV}/\text{XY} = \text{MAGLC}$$

- 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: Napthalene

TLV (mg/m³): 52.43

Maximum Hourly Emission Rate (lbs/hr): 8.52 (combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 350.7 (combined)

MAGLC (ug/m³): 1248.3

The permittee, has demonstrated that emissions of Napthalene, from emissions unit(s) F001, F002, and F003, 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).

- (5) 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 PTIO 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.

(6) 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.

(7) 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.

e) Reporting Requirements

(1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

The permittee shall identify the following information in the annual permit evaluation report:

- a. all daily checks during which any visible emissions of fugitive dust were observed from the egress points adjacent to this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible emissions of fugitive dust.
- (3) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
 - (4) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each rolling, 12-month period when the sand throughput limitation of 5,000 tons was exceeded.

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. Emissions limitation:

PE shall not exceed 3.90lb/hr and 1.63tpy.

Applicable Compliance Method:

The hourly PE limitation was established by multiplying the maximum hourly sand throughput (6.0 tons) by an emissions factor of 0.65 lbs PE/ton sand. The annual PE limitation was established by multiplying the maximum annual sand throughput (5,000 tons) by an emissions factor of 0.65 lbs PE/ton sand and then converting to tons by dividing by 2,000. The emissions factor was derived by adding the core sand and binder mixing emissions factor and the core making emissions factor for particulate emissions from Ohio's reasonably available control measures (RACM) document table 2.7-1.

If required, compliance with the hourly PE limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

b. Emissions limitation:

VOC emissions shall not exceed 19.02 lb/hr.

Applicable Compliance Method:

If required, compliance with the hourly VOC emissions limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-4 and 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

c. Emissions limitation:

VOC emissions shall not exceed 7.93 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the VOC emissions limitation is determined through the recordkeeping requirements established in d)(2) and the following calculation:

$$\text{VOC} = \text{VOC}_R + \text{VOC}_C$$

Where,

VOC_R = the VOC emissions from resin usage; and

VOC_C = the VOC emissions from catalyst usage;



Where,

$VOC_R = \text{resin usage (tons)} * 1.17^\#$; and

$VOC_C = \text{catalyst usage (tons)} * (V_C)$;

Where,

V_C = the VOC content of the catalyst, in percent by weight;

#The resin emissions factor was published in the Ohio Cast Metals Association (OCMA) OCMA Report and Recommendations Concerning Laboratory Testing Results of Foundry Binder Systems for Core and Mold Making and is corrected to the emissions unit specific proportion of resin to sand usage. For this emissions unit, the proportion of resin to sand usage is 1.0% by weight; therefore, the published emissions factor 1.17 lbs VOC/ton of sand is corrected by multiplying by (1.0%/1.0%) resulting in an emissions unit specific emissions factor of 1.17 lbs VOC/ton of sand.

Compliance with the annual limitation is demonstrated by totaling the sum of all monthly emissions for each calendar year.

d. Emissions limitation:

PM₁₀ emissions shall not exceed 1.38 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month limitation shall be demonstrated by multiplying the actual rolling, 12-month sand throughput required by d)(2) by an emissions factor of 0.55 lbs PM₁₀/ton sand and then converting to tons by dividing by 2,000. The emissions factor was derived by adding the core sand and binder mixing emissions factor and the core making emissions factor for particulate emissions from Ohio's reasonably available control measures (RACM) document table 2.7-1. The emissions factor was then reduced according to US EPA's PM calculator for the appropriate SCC code (85%).

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

e. Emissions limitation:

PM_{2.5} emissions shall not exceed 0.50 tons per rolling, 12-month period [as applicable prior to U.S. EPA approving OAC rule 3745-31-05(A)(3)(a)(ii) as part of the SIP].

Applicable Compliance Method:

Compliance with the rolling, 12-month limitation shall be demonstrated by multiplying the actual rolling, 12-month sand throughput required by d)(2) by an emissions factor of 0.20 lbs PM_{2.5}/ton sand and then converting to tons by



dividing by 2,000. The emissions factor was derived by adding the core sand and binder mixing emissions factor and the core making emissions factor for particulate emissions from Ohio's reasonably available control measures (RACM) document table 2.7-1. The emissions factor was then reduced according to US EPA's PM calculator for the appropriate SCC code (30%).

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

f. Emissions limitation:

There shall be no visible emissions of fugitive dust from the egress points adjacent to this emissions unit.

Applicable Compliance Method:

If required, compliance with the visible emissions of fugitive dust limitation shall be demonstrated through visible emissions observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.

3. F003, Core Sand Mixer

Operations, Property and/or Equipment Description:

Core Sand Mixer (Core Making)

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)f., d)(2) through d)(5), and e)(3)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)c., c)(1), d)(1), e)(4), 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) <i>June 30, 2008</i>	The volatile organic compound (VOC), particulate matter less than 10 microns in aerodynamic diameter (PM ₁₀), and particulate matter less than 2.5 microns in aerodynamic diameter (PM _{2.5}) emissions established by this rule are equivalent to the limitations established pursuant to OAC rule 3745-31-05(D). See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) <i>June 30, 2008</i>	See b)(2)b.
c.	OAC rule 3745-31-05(D) (Synthetic Minot to avoid Title V)	VOC emissions shall not exceed 6.35 tons per rolling, 12-month period. PM ₁₀ emissions shall not exceed 1.38 tons per rolling, 12-month period. PM _{2.5} emissions shall not exceed 0.50



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		tons per rolling, 12-month period.
d.	OAC rule 3745-17-07(B)(1)	See b)(2)c.
e.	OAC rule 3745-17-08(B)	See b)(2)d.
f.	ORC 3704.03(F)	See d)(2) through d)(5) and e)(3)

(2) Additional Terms and Conditions

- a. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that Best Available Technology (BAT) is no longer required by state regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, paragraph (A)(3)(a)(ii) of OAC rule 3745-31-05 (the less than 10 tons per year BAT exemption) has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revisions to OAC rule 3745-31-05(A)(3)(a)(ii), the requirement to satisfy BAT for pollutant(s) less than 10 tons per year still exists as part of the federally-approved SIP.
- b. The following rule paragraph will apply when 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 BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC, PM₁₀ and PM_{2.5} emissions from this air contaminant source because the uncontrolled potential to emit for each pollutant is less than 10 tons/year.
- c. This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- d. This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

c) Operational Restrictions

- (1) Sand throughput for this emissions unit shall not exceed 5,000 tons per rolling, 12-month period.

The permittee has existing records of the sand throughput; therefore, the first year of accumulating monthly sand throughput limitations is not necessary.

d) Monitoring and/or Recordkeeping Requirements

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

- a. The name and identification of each binder component (e.g., resin, catalyst, etc.);
 - b. The quantity of each binder component used;
 - c. The VOC content of each binder component;
 - d. The monthly VOC emissions from all binder components [determined in accordance with f)(1)c.];
 - e. The total rolling, 12-month VOC emissions;
 - f. The monthly sand throughput;
 - g. The rolling, 12-month sand throughput;
 - h. The rolling, 12-month PM₁₀ emissions [determined in accordance with f)(1)a.]; and
 - i. The rolling, 12-month PM_{2.5} emissions [determined in accordance with f)(1)b.];
- (2) The PTIO application for this/these emissions unit(s), F001, F002, and F003, was evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these 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, AERMOD, or ISCST3, or other Ohio EPA approved model. 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., “X” is 24 hours per day and “Y” is 7 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):

$$\text{TLV}/10 \times 8/\text{X} \times 5/\text{Y} = 4 \text{ TLV}/\text{XY} = \text{MAGLC}$$

- 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: Napthalene

TLV (mg/m³): 52.43

Maximum Hourly Emission Rate (lbs/hr): 8.52 (combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 350.7 (combined)

MAGLC (ug/m³): 1248.3

The permittee, has demonstrated that emissions of Napthalene, from emissions unit(s) F001, F002, and F003, 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).

- (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 PTIO 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.

- (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.
 - (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.
- e) Reporting Requirements
- (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- (4) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each rolling, 12-month period when the sand throughput limitation of 5,000 tons was exceeded.

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. Emissions limitation:

PM₁₀ emissions shall not exceed 1.38 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month limitation shall be demonstrated by multiplying the actual rolling, 12-month sand throughput required by d)(1) by an emissions factor of 0.55 lbs PM₁₀/ton sand and then converting to tons by dividing by 2,000. The emissions factor was derived by adding the core sand and binder mixing emissions factor and the core making emissions factor for particulate emissions from Ohio's reasonably available control measures (RACM)



document table 2.7-1. The emissions factor was then reduced according to US EPA's PM calculator for the appropriate SCC code (85%).

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

b. Emissions limitation:

PM_{2.5} emissions shall not exceed 0.50 tons per rolling, 12-month period [as applicable prior to U.S. EPA approving OAC rule 3745-31-05(A)(3)(a)(ii) as part of the SIP].

Applicable Compliance Method:

Compliance with the rolling, 12-month limitation shall be demonstrated by multiplying the actual rolling, 12-month sand throughput required by d)(1) by an emissions factor of 0.20 lbs PM_{2.5}/ton sand and then converting to tons by dividing by 2,000. The emissions factor was derived by adding the core sand and binder mixing emissions factor and the core making emissions factor for particulate emissions from Ohio's reasonably available control measures (RACM) document table 2.7-1. The emissions factor was then reduced according to US EPA's PM calculator for the appropriate SCC code (30%).

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

c. Emissions limitation:

VOC emissions shall not exceed 6.35 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the VOC emissions limitation is determined through the recordkeeping requirements established in d)(1) and the following calculation:

$$VOC = VOC_R + VOC_C$$

Where,

VOC_R = the VOC emissions from resin usage; and

VOC_C = the VOC emissions from catalyst usage;

Where,

VOC_R = resin usage (tons) * 0.94[#]; and

VOC_C = catalyst usage (tons) * (V_C);



Where,

V_C = the VOC content of the catalyst, in percent by weight;

#The resin emissions factor was published in the Ohio Cast Metals Association (OCMA) OCMA Report and Recommendations Concerning Laboratory Testing Results of Foundry Binder Systems for Core and Mold Making and is corrected to the emissions unit specific proportion of resin to sand usage. For this emissions unit, the proportion of resin to sand usage is 0.8% by weight; therefore, the published emissions factor 1.17 lbs VOC/ton of sand is corrected by multiplying by (0.8%/1.0%) resulting in an emissions unit specific emissions factor of 0.94 lbs VOC/ton of sand.

Compliance with the rolling, 12-month limitation is demonstrated by summing the current month with the previous 11 months.

g) Miscellaneous Requirements

(1) None.

4. F004, Pouring and Cooling

Operations, Property and/or Equipment Description:

Pouring and Cooling

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)f.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- 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) <i>June 30, 2008</i>	<p>Nitrogen Oxide (NO_x) emissions shall not exceed 0.07 tons per rolling, 12-month period.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.14 tons per rolling, 12-month period.</p> <p>Carbon monoxide (CO) emissions shall not exceed 28.91 tons per rolling, 12-month period.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 1.01 tons per rolling, 12-month period.</p> <p>Emissions of particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) shall not exceed 9.83 tons per</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rolling, 12-month period. Emissions of particulate matter less than 2.5 microns in aerodynamic diameter (PM _{2.5}) shall not exceed 4.81 tons per rolling, 12-month period. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) <i>June 30, 2008</i>	See b)(2)b.
c.	OAC rule 3745-17-07(B)(1)	See b)(2)c.
d.	OAC rule 3745-17-08(B)	See b)(2)d.
e.	OAC rule 3745-18-06(E)(2)	SO ₂ emissions shall not exceed 41.8 pounds per hour (lb/hr). See b)(2)e.
f.	ORC 3704.03(F)	See d)(2)

(2) Additional Terms and Conditions

- a. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that Best Available Technology (BAT) is no longer required by state regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, paragraph (A)(3)(a)(ii) of OAC rule 3745-31-05 (the less than 10 tons per year BAT exemption) has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revisions to OAC rule 3745-31-05(A)(3)(a)(ii), the requirement to satisfy BAT for pollutant(s) less than 10 tons per year still exists as part of the federally-approved SIP.
- b. The following rule paragraph will apply when 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 BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, SO₂, VOC, PM₁₀ and PM_{2.5} emissions from this air contaminant source because the uncontrolled potential to emit for each pollutant is less than 10 tons/year.
- c. This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).

- d. This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
 - e. The hourly SO₂ emissions limitation established pursuant to OAC rule 3745-18-06(E)(2) is greater than the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with this limitation.
- c) Operational Restrictions
- (1) None.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The NO_x, SO₂, CO, VOC, PM₁₀ and PM_{2.5} emissions limitations were established to reflect the potential to emit for each pollutant taking into consideration the maximum combined rolling, 12-month metal pouring capabilities of the furnaces of 14,454 tons. Therefore, in order to demonstrate compliance with the NO_x, SO₂, CO, VOC, PM₁₀ and PM_{2.5} emissions limitations the permittee shall maintain the following records on a monthly basis for this emissions unit:
 - a. The monthly amount of metal poured; and
 - b. The rolling, 12-month amount of metal poured.
- The above recordkeeping requirements shall no longer be necessary for the NO_x, SO₂, VOC, PM₁₀ and PM_{2.5} emissions after U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) as part of the SIP; however, these or similar records may still be necessary in order to satisfy fee emissions reporting requirements.
- (2) 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 PTIO 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 PTIO.
- e) Reporting Requirements
- (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

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. Emissions limitations:

NO_x emissions shall not exceed 0.07 tons per rolling, 12-month period.
 SO₂ emissions shall not exceed 0.14 tons per rolling, 12-month period.
 CO emissions shall not exceed 28.91 tons per rolling, 12-month period.
 VOC emissions shall not exceed 1.01 tons per rolling, 12-month period.

Applicable Compliance Method:

The NO_x, SO₂, CO, and VOC emissions limitations were established by multiplying the maximum combined rolling, 12-month metal pouring capabilities of the furnaces (14,454 tons) by the following emissions factor for each pollutant from US EPA's Webfire database version 6.25 for SCC code 30400708:

<u>Pollutant</u>	<u>Emissions factor (lb/ton of metal poured)</u>
NO _x	0.01
SO ₂	0.02
CO	4.00
VOC	0.14

b. Emissions limitations:

PM₁₀ shall not exceed 9.83 tons per rolling, 12-month period.
 PM_{2.5} shall not exceed 4.81 tons per rolling, 12-month period.

Applicable Compliance Method:

The PM₁₀ and PM_{2.5} emissions limitations were established by multiplying the maximum combined rolling, 12-month metal pouring capabilities of the furnaces



of (14,454 tons) by the following emissions factor* for each pollutant from US EPA's Webfire database version 6.25 for SCC code 30400708:

<u>Pollutant</u>	<u>Emissions factor (lb/ton of metal poured)</u>
PM ₁₀	1.37
PM _{2.5}	0.67

*PM10 and PM2.5 emissions factors are not available for SCC code 30400708; therefore, the ratio of PM to PM₁₀ and PM_{2.5} emissions from grey iron foundry SCC code 30400318 was used to establish proportional PM₁₀ and PM_{2.5} emissions factors.

c. Emission limitations:

SO₂ emissions shall not exceed 41.8 lb/hr.

Applicable Compliance Method:

Compliance may be determined by multiplying the maximum combined hourly metal pouring capabilities of the furnaces (1.64 tons) by the SO₂ emissions factor from US EPA's Webfire database version 6.25 for SCC code 30400708 (0.02 lbs SO₂/ton metal poured)

If required, compliance with the hourly SO₂ emissions limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

g) Miscellaneous Requirements

- (1) None.

5. F005, Wheelabrator - Table Blast

Operations, Property and/or Equipment Description:

Wheelabrator - Table Blast controlled by a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

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 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 8.82 pounds per hour (lb/hr).
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. None

c) Operational Restrictions

(1) The emissions from this emissions unit shall be directed to a baghouse at all times when the emissions unit is operating.

d) Monitoring and/or Recordkeeping Requirements

- (1) The hourly PE limitation is greater than the potential to emit for this emission unit, taking into consideration the control efficiency of the baghouse. The monitoring, recordkeeping, reporting, and testing requirements for the baghouse as established in the following terms and conditions are sufficient to demonstrate compliance with this limitation.
- (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 baghouse 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.

e) Reporting Requirements

- (1) 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 District Office or 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 required application, notification or report is

considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

The permittee shall identify the following information in the annual permit evaluation report:

- a. all daily checks during which any visible particulate emissions were observed from the baghousestack serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

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:

PE shall not exceed 8.82 lb/hr.

Applicable Compliance Method:

The hourly PE limitation was established in accordance with Figure II of the appendix of OAC rule 3745-17-11 using an uncontrolled mass rate of emissions (UMRE) of 68 lb PE/hr. The UMRE was calculated by multiplying the maximum metal throughput (4 ton/hr) by the emissions factor from US EPA's Webfire database version 6.25 for SCC code 30400340 (17.0 lb PE/ton metal).

If required, compliance with the hourly PE limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

b. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the baghouse stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.



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- g) Miscellaneous Requirements
 - (1) None.



6. F006, Shakeout

Operations, Property and/or Equipment Description:

Shakeout

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)d.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

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	<p>Particulate emissions (PE) shall not exceed 5.28 pounds per hour (lb/hr) and 23.13 tons per year (tpy).</p> <p>Volatile organic compound (VOC) emissions shall not exceed 1.98 lb/hr and 8.67 tpy.</p> <p>Carbon monoxide (CO) emissions shall not exceed 1.65 lb/hr and 7.23 tpy.</p> <p>There shall be no visible emissions of fugitive dust from the egress points adjacent to this emissions unit.</p>
b.	OAC rule 3745-17-07(B)(1)	See b)(2)a.
c.	OAC rule 3745-17-08(B)	See b)(2)b.
d.	ORC 3704.03(F)	See d)(3)

- (2) Additional Terms and Conditions
 - a. This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
 - b. This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- c) Operational Restrictions
 - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The hourly and annual PE, VOC, and CO limitations were established to reflect the potential to emit for each pollutant taking into consideration the maximum combined metal pouring capability of the furnaces (1.65 tons/hr and 14,454 tons/yr). Therefore, it is not necessary to develop monitoring or recordkeeping requirements to ensure compliance with these limitations; however, some records may still be necessary in order to satisfy fee emissions reporting requirements.
 - (2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) adjacent to 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. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
 - (3) 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 PTIO 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 PTIO.
- e) Reporting Requirements
 - (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

The permittee shall identify the following information in the annual permit evaluation report:

- a. all daily checks during which any visible emissions of fugitive dust were observed from the egress points adjacent to this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible emissions of fugitive dust.

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. Emissions limitation:

PE shall not exceed 5.28 lb/hr and 23.13 tpy.

Applicable Compliance Method:

The hourly PE limitation was established by multiplying the maximum hourly combined metal pouring capability of the furnaces (1.65 tons) by an emissions factor of 3.20 lbs PE/ton metal. The annual PE limitation was established by multiplying the maximum annual combined metal pouring capability of the furnaces (14,454 tons) by an emissions factor of 3.20 lbs PE/ton metal and then converting to tons by dividing by 2,000. The emissions factor is from US EPA's Webfire database version 6.25 for SCC code 30400331.

If required, compliance with the hourly PE limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

b. Emissions limitation:

VOC emissions shall not exceed 1.98 lb/hr and 8.67 tpy.

Applicable Compliance Method:

The hourly VOC emissions limitation was established by multiplying the maximum hourly combined metal pouring capability of the furnaces (1.65 tons) by an emissions factor of 1.20 lbs VOC/ton metal. The annual VOC emissions limitation was established by multiplying the maximum annual combined metal pouring capability of the furnaces (14,345 tons) by an emissions factor of 1.20 lbs VOC/ton metal and then converting to tons by dividing by 2,000. The emissions factor is from US EPA's Webfire database version 6.25 for SCC code 30400331.

If required, compliance with the hourly VOC emissions limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-4 and 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

c. Emissions limitation:

CO emissions shall not exceed 1.65 lb/hr and 7.23 tpy.

Applicable Compliance Method:

The hourly CO emissions limitation was established by multiplying the maximum hourly combined metal pouring capability of the furnaces (1.65 tons) by an emissions factor of 1.0 lbs CO/ton metal. The annual CO emissions limitation was established by multiplying the maximum annual combined metal pouring capability of the furnaces (14,454 tons) by an emissions factor of 1.0 lbs CO/ton metal and then converting to tons by dividing by 2,000. The emissions factor is from the US EPA RACT/BACT/LAER Clearinghouse and was established as an emissions limitation for shakeout operations as part of a prevention of significant deterioration (PSD) permitting action for the Waupaca Foundry - Plant 5 in Indiana.

If required, compliance with the hourly CO emissions limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

d. Emissions limitation:

There shall be no visible emissions of fugitive dust from the egress points adjacent to this emissions unit.



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Applicable Compliance Method:

If required, compliance with the visible emissions of fugitive dust limitation shall be demonstrated through visible emissions observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.

7. F007, Tumblast Units

Operations, Property and/or Equipment Description:

Two Tumblast Units - Small and Large Tumbleblast Shotblast Units controlled by a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

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	Particulate emissions (PE) shall not exceed 0.75 tons per year (tpy). Outlet grain loading from the baghouse serving this emissions unit shall not exceed 0.01 grain per dry standard cubic foot (gr/dscf).
b.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05. See b)(2)a.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The outlet grain loading and annual PE limitations were established to reflect the potential to emit for this emission unit, taking into consideration the control efficiency of the baghouse. The monitoring, recordkeeping, reporting, and testing requirements for the baghouse as established in the following terms and conditions are sufficient to demonstrate compliance with this limitation.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be directed to a baghouse at all times when the emissions unit is operating.

d) Monitoring and/or Recordkeeping Requirements

(1) The hourly and annual PE limitations were established to reflect the potential to emit for each pollutant taking into consideration the maximum hourly and annual operating capacities of 3.0 tons/hr and 26,280 tons/yr. Therefore, it is not necessary to develop monitoring or recordkeeping requirements to ensure compliance with these limitations; however, some records may still be necessary in order to satisfy fee emissions reporting requirements.

(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 baghouse 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.

e) Reporting Requirements

- (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

The permittee shall identify the following information in the annual permit evaluation report:

- a. all daily checks during which any visible particulate emissions were observed from the baghousestack serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

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. Emissions limitation:

Outlet grain loading from the baghouse serving this emissions unit shall not exceed 0.01 gr/dscf.

Applicable Compliance Method:

If required, compliance with the outlet grain loading limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.



b. Emissions limitation:

PE shall not exceed 0.75 tpy.

Applicable Compliance Method:

The annual PE limitation was established by multiplying the maximum blower rating (2,000 acfm) by the outlet grain loading limitation of 0.01 gr/dscf. The result was then converted to lb/hr by multiplying by 60 min/hr and 1 lb/7,000 gr and then converted to tons per year by multiplying by the maximum number of hours in a year (8,760) and dividing by 2,000.

c. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the baghouse stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.

8. F008, Mold/Core Wash

Operations, Property and/or Equipment Description:

Mold and Core Wash

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

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	<p>Volatile organic compound (VOC) emissions shall not exceed 29.51 pounds per hour (lb/hr) and 13.41 tons per year (tpy).</p> <p>See b)(2)a. through b)(2)c.</p>

(2) Additional Terms and Conditions

a. The "Best Available Technology" (BAT) control requirement for this emissions unit has been determined to be the use of flammable solvent-based core and mold coatings with light-off operations to reduce VOC emissions.

b. The permittee shall install and employ reasonably available control measures to minimize fugitive emissions of VOC from storage and application of mold/core wash and IPA.

- c. The hourly VOC emissions limitation was established to reflect the potential to emit for this emissions unit. It is not necessary to establish monitoring or recordkeeping requirements in order to ensure compliance with this limitation.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

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

- a. The name and identification of each mold and/or core wash component (e.g., coating, solvent, etc.);
- b. The quantity of each mold and/or core wash component used;
- c. The VOC content of each mold and/or core wash component; and
- d. The total VOC emissions from mold and/or core wash components [determined in accordance with f)(1)a.].

- (2) The permittee shall maintain daily records of the following information:

- a. any mold and/or core wash application in which the mold and/or core wash was not lit off within one minute of application;
- b. the reason for not lighting off the mold and/or core wash within one minute of application;
- c. the time, in minutes, before the mold and/or core wash was lit off; and
- d. the corrective action taken to prevent further occurrences.

e) Reporting Requirements

- (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid

electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

The permittee shall identify the following information in the annual permit evaluation report:

- a. all daily records indicating that a mold and/or core wash was not lit off within one minute of application; and
- b. any exceedance of the annual VOC emissions limitation.

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. Emissions limitation:

VOC emissions shall not exceed 29.51 lb/hr and 13.41 tpy.

Applicable Compliance Method:

If required, compliance with the hourly VOC emissions limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-4 and 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

Compliance with the annual VOC emissions limitation shall be determined through the recordkeeping requirements established in d)(2) and the following calculation:

$$VOC = VOC_C + VOC_S$$

Where,

VOC_C = the VOC emissions from coating usage; and

VOC_S = the VOC emissions from solvent usage;

Where,

VOC_C = coating usage(tons) * (V_{C1}) * (1-CE)[#]; and

VOC_S = solvent usage(tons) * (V_{C2}) * (1-CE)[#];



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Where,

V_{C1} = the VOC content of the coating, in percent by weight;

V_{C2} = the VOC content of the solvent, in percent by weight; and

CE = Control efficiency (70% control efficiency was published in the American Foundry Society (AFS) Casting Congress *"Measurement of Emissions Associated With the Application of a Flammable Solvent-based Core and Mold Coating"* (May 1998).

Compliance with the annual limitation is demonstrated by totaling the sum of all monthly emissions for each calendar year.

g) Miscellaneous Requirements

- (1) None.

9. F009, Charge Handling

Operations, Property and/or Equipment Description:

Charge Handling

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- 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	Particulate emissions (PE) shall not exceed 0.99 pounds per hour (lb/hr) and 4.34 tons per year (tpy).
b.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05.
c.	OAC rule 3745-17-07(B)(1)	See b)(2)a.
d.	OAC rule 3745-17-08(B)	See b)(2)b.

- (2) Additional Terms and Conditions
 - a. This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
 - b. This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The hourly and annual PE limitations were established to reflect the potential to emit for this emissions unit taking into consideration the maximum combined metal pouring capability of the furnaces of 1.65 tons/hr and 14,454 tons/yr. Therefore, it is not necessary to develop monitoring or recordkeeping requirements to ensure compliance with these limitations; however, some records may still be necessary in order to satisfy fee emissions reporting requirements.

e) Reporting Requirements

- (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

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. Emissions limitation:

PE shall not exceed 0.99 lb/hr and 4.34 tpy.

Applicable Compliance Method:

The hourly PE limitation was established by multiplying the maximum hourly combined metal pouring capability of the furnaces (1.65 tons) by an emissions



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factor of 0.60 lbs PE/ton metal processed. The annual PE limitation was established by multiplying the maximum annual combined metal pouring capability of the furnaces (14,454 tons) by an emissions factor of 0.60 lbs PE/ton metal processed and then converting to tons by dividing by 2,000. The emissions factor was derived using the published emissions factor from AP-42 Table 12.13-2 for PM₁₀ emissions and adjusting the emissions factor according to US EPA's PM calculator for the appropriate SCC code (PM₁₀ emissions represent 60% of total PM emissions).

If required, compliance with the hourly PE limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

g) Miscellaneous Requirements

- (1) None.

10. F010, Mold Supply Silo

Operations, Property and/or Equipment Description:

Mold Supply Silo controlled by a baghouse

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- 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	Particulate emissions (PE) shall not exceed 0.75 tons per year (tpy). Outlet grain loading from the baghouse serving this emissions unit shall not exceed 0.01 grain per dry standard cubic foot (gr/dscf).
b.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05. See b)(2)a.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

- a. The outlet grain loading and annual PE limitations were established to reflect the potential to emit for this emission unit, taking into consideration the control efficiency of the baghouse. The monitoring, recordkeeping, reporting, and testing requirements for the baghouse as established in the following terms and conditions are sufficient to demonstrate compliance with this limitation.

c) Operational Restrictions

- (1) None.

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 baghouse 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.

- (2) 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.

e) Reporting Requirements

- (1) 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 District Office or 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 required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

The permittee shall identify the following information in the annual permit evaluation report:

- a. all daily checks during which any visible particulate emissions were observed from the baghousestack serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

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. Emissions limitation:

Outlet grain loading from the baghouse serving this emissions unit shall not exceed 0.01 gr/dscf.

Applicable Compliance Method:

If required, compliance with the outlet grain loading limitation shall be demonstrated through emissions tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA, Central District Office.

b. Emissions limitation:

PE shall not exceed 0.75 tpy.

Applicable Compliance Method:

The annual PE limitation was established by multiplying the maximum blower rating (2,000 acfm) by the outlet grain loading limitation of 0.01 gr/dscf. The result was then converted to lb/hr by multiplying by 60 min/hr and 1 lb/7,000 gr



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and then converted to tons per year by multiplying by the maximum number of hours in a year (8,760) and dividing by 2,000.

c. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the baghouse stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.