



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

12/1/2015

Rodney McDaniels
 General Aluminum
 5159 S. Prospect St.
 Rootstown, OH 44266

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1667070012
 Permit Number: P0119245
 Permit Type: Renewal
 County: Portage

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
 77 South High Street, 17th Floor
 Columbus, OH 43215

Certified Mail

| | |
|-----|------------------------------------|
| 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 |

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF 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.

If you have any questions, please contact Akron Regional Air Quality Management District at (330)375-2480 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: ARAQMD



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
General Aluminum**

| | |
|----------------|------------|
| Facility ID: | 1667070012 |
| Permit Number: | P0119245 |
| Permit Type: | Renewal |
| Issued: | 12/1/2015 |
| Effective: | 12/1/2015 |
| Expiration: | 12/1/2020 |



**Division of Air Pollution Control
Permit-to-Install and Operate**

for
General Aluminum

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Final Permit-to-Install and Operate
General Aluminum
Permit Number: P0119245
Facility ID: 1667070012
Effective Date: 12/1/2015

Authorization

Facility ID: 1667070012
Application Number(s): A0053378
Permit Number: P0119245
Permit Description: Renewal FEPTIO for an aluminum foundry.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 12/1/2015
Effective Date: 12/1/2015
Expiration Date: 12/1/2020
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

General Aluminum
5159 S. Prospect St.
Rootstown, OH 44266

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

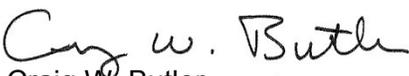
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Akron Regional Air Quality Management District
1867 West Market St.
Akron, OH 44313
(330)375-2480

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: P0119245
 Permit Description: Renewal FEPTIO for an aluminum foundry.

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

- | | |
|-----------------------------------|-------------------------------------|
| Emissions Unit ID: | P002 |
| Company Equipment ID: | Heat Treat Furnace |
| Superseded Permit Number: | P0108633 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P906 |
| Company Equipment ID: | 15 casting and knock out stations. |
| Superseded Permit Number: | P0107606 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P907 |
| Company Equipment ID: | Foundry core sand reclamation unit. |
| Superseded Permit Number: | P0107606 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P908 |
| Company Equipment ID: | Sand break down line. |
| Superseded Permit Number: | P0107606 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P910 |
| Company Equipment ID: | Sand blast operation |
| Superseded Permit Number: | P0107606 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P920 |
| Company Equipment ID: | Shotblasting Operation |
| Superseded Permit Number: | P0106374 |
| General Permit Category and Type: | Not Applicable |

Group Name: Aluminum Reverberator Furnaces

| | |
|-----------------------------------|-----------------------------------|
| Emissions Unit ID: | P901 |
| Company Equipment ID: | #3 Aluminum Reverberator Furnace. |
| Superseded Permit Number: | P0118009 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P902 |
| Company Equipment ID: | #1 Aluminum Reverberator Furnace. |
| Superseded Permit Number: | P0118009 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P903 |
| Company Equipment ID: | #2 Aluminum Reverberator Furnace. |
| Superseded Permit Number: | P0118009 |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P905 |
| Company Equipment ID: | #5 Aluminum Reverberator Furnace. |
| Superseded Permit Number: | P0118009 |
| General Permit Category and Type: | Not Applicable |

Group Name: Casting Pouring and Cooling Line

| | |
|----------------------------------|---|
| Emissions Unit ID: | F001 |
| Company Equipment ID: | Eleven floor pouring and cooling operations. |
| Superseded Permit Number: | P0107606 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | F002 |
| Company Equipment ID: | Pouring and Cooling line #1, rotating turn table. |
| Superseded Permit Number: | P0107606 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | F003 |
| Company Equipment ID: | Pouring and Cooling line #1, rotating turn table. |
| Superseded Permit Number: | P0107606 |
| General Permit Category andType: | Not Applicable |

Group Name: Core Making Machines

| | |
|----------------------------------|------------------------------|
| Emissions Unit ID: | P909 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P911 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P912 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P913 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P914 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P915 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P916 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P917 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P918 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |



Final Permit-to-Install and Operate
 General Aluminum
Permit Number: P0119245
Facility ID: 1667070012
Effective Date: 12/1/2015

| | |
|----------------------------------|------------------------------|
| Emissions Unit ID: | P919 |
| Company Equipment ID: | Cold box core making machine |
| Superseded Permit Number: | P0118009 |
| General Permit Category andType: | Not Applicable |

Group Name: Furnaces

| | |
|----------------------------------|----------------|
| Emissions Unit ID: | P922 |
| Company Equipment ID: | Furnace #4 |
| Superseded Permit Number: | P0118461 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | P923 |
| Company Equipment ID: | Furnace #6 |
| Superseded Permit Number: | P0118461 |
| General Permit Category andType: | Not Applicable |

Group Name: Pouring/Cooling Turntables

| | |
|----------------------------------|--------------------------------|
| Emissions Unit ID: | F004 |
| Company Equipment ID: | 1100 Pouring/Cooling Turntable |
| Superseded Permit Number: | P0118461 |
| General Permit Category andType: | Not Applicable |
| Emissions Unit ID: | F005 |
| Company Equipment ID: | 1500 Pouring/Cooling Turntable |
| Superseded Permit Number: | P0118461 |
| General Permit Category andType: | Not Applicable |



Final Permit-to-Install and Operate
General Aluminum
Permit Number: P0119245
Facility ID: 1667070012
Effective Date: 12/1/2015

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 [DO/LAA] 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.



Final Permit-to-Install and Operate
General Aluminum
Permit Number: P0119245
Facility ID: 1667070012
Effective Date: 12/1/2015

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) All.
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 ZZZZZZ, the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Aluminum, Copper, and Other Nonferrous Foundries. 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.
3. Facility-wide emission limitations to avoid Title V permitting requirements.

a) Applicable Emissions Limitations and/or Control Requirements

- (1) Facility-wide VOC emissions shall not exceed the listed limitations.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|--|
| a. | OAC rule 3745-31-05(D) | Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation. See b)(1) – b)(2) below. |

- (2) Additional Terms and Conditions

- a. None.

b) Operational Restrictions

- (1) Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation.

- (2) Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation.
- c) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall maintain monthly records of the following information for the entire facility:
 - a. The combined rolling, 12-month summation of the total VOC emissions, in pounds or tons;
 - b. The combined rolling, 12-month summation of the total aluminum production throughput, in pounds or tons; and
 - c. The combined rolling, 12-month summation of the total amount of sand usage, in pounds or tons.
- d) **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 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. 96.3 tons of VOC, as a rolling, 12-month summation for the entire facility;
 - ii. 17,000 tons of aluminum throughput, as a rolling, 12-month summation for the entire facility; and
 - iii. 17,000 tons of sand throughput, as a rolling, 12-month summation for the entire facility.
 - b. the probable cause of each deviation (excursion);

- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

e) **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:

Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the VOC mass emission limitation shall be determined through the record keeping requirements of section c)(1) above and calculated in accordance with the following methodology:

Combined annual VOC emissions = \sum (Aluminum Furnaces + Pouring & Cooling Lines + Knockout + Sand Reclaimer + Heat Treat + Core Making)

Where:

Aluminum Furnace Emissions = (1.67 pounds VOC per ton metal processed) * (17,000 tons maximum metal throughput allowable) / (2000 pounds per ton) = 14.2 tons VOC

Pouring & Cooling Emissions = (2.17 pounds VOC per ton metal processed) * (17,000 tons maximum metal throughput allowable) * (95% capture efficiency) / (2000 pounds per ton) = 17.5 tons VOC

Knockout Emissions = (3.57 pounds VOC per ton metal processed) * (17,000 tons maximum metal throughput allowable) * (95% capture efficiency) / (2000 pounds per ton) = 28.8 tons VOC

Sand Reclaimer Emissions = (2.90 pounds VOC per ton sand) * (17,000 tons maximum sand throughput allowable) * (99% capture efficiency) / (2000 pounds per ton) = 24.4 tons VOC



Final Permit-to-Install and Operate

General Aluminum

Permit Number: P0119245

Facility ID: 1667070012

Effective Date: 12/1/2015

Heat Treat Emissions = (5.50 pounds VOC per MMCF fuel usage) * (300.59 MMCF burner fuel usage) / (2000 pounds per ton) = 0.83 tons VOC

Core Making Emissions = (0.92 pound VOC per ton sand) * (17,000 tons maximum sand throughput allowable) * (99% capture efficiency) / (2000 pounds per ton) = 7.74 tons VOC

f) Miscellaneous Requirements

(1) None.



Final Permit-to-Install and Operate
General Aluminum
Permit Number: P0119245
Facility ID: 1667070012
Effective Date: 12/1/2015

C. Emissions Unit Terms and Conditions

1. P002, Heat Treat Furnace

Operations, Property and/or Equipment Description:

35 MMBtu/hr Heat Treat Furnace Unit. Consisting of three Eclipse furnaces (10 MMBtu/hr each) and two age ovens (2.5 MMBtu/hr each)

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(A)(3), as effective 6/30/2008 | Particulate emissions (PE) shall not exceed 0.26 pound per hour, and 1.14 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.02 pound per hour, and 0.09 ton SO ₂ per year. Volatile organic compound (VOC) emissions shall not exceed 0.19 pound per hour, and 0.83 tons OC per year. Visible PE from any stack shall not exceed 10% opacity, as a 6-minute average. See b)(2)a. below. |
| b. | OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/2008 | The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the SO ₂ , PE, and VOC limitations from this air |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|---|---|
| | | contaminant source since the potential to emit is each less than 10 tons per year. See b)(2)b. below. |
| c. | ORC 3704.03(T) and OAC rule 3745-31-05(A)(3) | Carbon monoxide (CO) emissions shall not exceed 0.082 pound per million Btu. Nitrogen oxides (NO _x) emissions shall not exceed 0.098 pound per million Btu. |
| c. | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. This limit applies after the SIP is approved as noted below in b)(2)b. removing the BAT limits. |
| d. | OAC rule 3745-17-10(B)(1) | PE shall not exceed 0.020 pound per million Btu of actual heat input. This limit applies after the SIP is approved as noted below in b)(2)b. removing the BAT limits. |

(2) Additional Terms and Conditions

- a. The BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than ten tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than ten tons per year BAT exemption) into the Ohio SIP.

c) Operational Restrictions

- (1) The permittee shall only fire natural gas as fuel in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) None.

e) Reporting Requirements

- (1) 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. Emission Limitation:

PE shall not exceed 0.26 pound per hour, and 1.14 tons per year

PE shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

Compliance with the hourly PE limitation identified above shall be demonstrated by dividing the emission factor of 7.6 lb/10⁶scf (AP-42 Table 1.4-2, July 1998) by a conversion factor 1,020 MMBtu/10⁶scf and multiplying by the emissions unit's maximum rated heat input capacity of 35 MMBtu/hr.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

If required, the permittee shall demonstrate compliance with the PE limitation based on the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

b. Emission Limitation:

SO₂ emissions shall not exceed 0.02 pound per hour, and 0.09 ton SO₂ per year.

Applicable Compliance Method:

Compliance with the hourly SO₂ emissions limitation identified above shall be demonstrated by dividing the emission factor of 0.6 lb/10⁶scf (AP-42 Table 1.4-2, July 1998) by a conversion factor 1,020 MMBtu/10⁶scf and multiplying by the emissions unit's maximum rated heat input capacity of 35 MMBtu/hr.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

If required, the permittee shall demonstrate compliance with the SO₂ limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

VOC emissions shall not exceed 0.19 pound per hour, and 0.83 tons VOC per year.

Applicable Compliance Method:

Compliance with the hourly VOC emissions limitation identified above shall be demonstrated by dividing the emission factor of 5.5 lb/10⁶scf (AP-42 Table 1.4-2, July 1998) by a conversion factor 1,020 MMBtu/10⁶scf and multiplying by the emissions unit's maximum rated heat input capacity of 35 MMBtu/hr.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

If required, the permittee shall demonstrate compliance with the VOC limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 18 or 25/25A, as appropriate, of 40 CFR Part 60, Appendix A.

d. Emission Limitation:

CO emissions shall not exceed 0.082 pound per million Btu.

Applicable Compliance Method:

Compliance with the lb CO/MMBtu emissions limitation identified above shall be demonstrated by dividing the emission factor of 84 lb/10⁶scf (AP-42 Table 1.4-1, July 1998) by a conversion factor 1,020 MMBtu/10⁶scf.

If required, the permittee shall demonstrate compliance with the CO limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

e. Emission Limitation:

NO_x emissions shall not exceed 0.098 pound per million Btu.

Applicable Compliance Method:

Compliance with the lb NO_x/MMBtu emissions limitation identified above shall be demonstrated by dividing the emission factor of 100 lb/10⁶scf (AP-42 Table 1.4-1, July 1998) by a conversion factor 1,020 MMBtu/10⁶scf.

If required, the permittee shall demonstrate compliance with the NO_x limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 7E of 40 CFR Part 60, Appendix A.



f. Emission Limitation:

Visible PE shall not exceed 10% opacity as a 6-minute average.

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.

2. P906, 15 casting and knock out stations.

Operations, Property and/or Equipment Description:

15 Casting and knock out stations.

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. All.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) | Stack Emissions: Volatile organic compound (VOC) emissions shall not exceed 7.15 pounds per hour and 31.31 tons per year. Particulate emissions (PE) shall not exceed 0.96 pound per hour and 4.2 tons per year. Fugitive Emissions: VOC emissions shall not exceed 1.01 pounds per hour and 4.4 tons per year. PE shall not exceed 0.38 pound per hour and 1.6 tons per year. Visible PE of fugitive dust shall not |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>exceed 5% opacity as a 3-minute average.</p> <p>See b)(2)a below.</p> |
| b. | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20% opacity, as a 3-minute average, except as provided by rule. |
| c. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | <p>Exempt.</p> <p>Not located in an area specified in Appendix A of OAC rule 3745-17-08.</p> |
| d. | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC Rule 3745-31-05(A)(3). |
| e. | OAC rule 3745-31-05(D) | <p>Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation.</p> <p>Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation.</p> <p>Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation.</p> <p>See 3 of Section B. Facility-Wide Terms and Conditions.</p> |

(2) Additional Terms and Conditions

a. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 7.5 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

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

- (3) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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.
- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (4) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
 - c. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - d. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - e. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

f) Testing Requirements

(1) Compliance with the emission limitation(s) in Section b)(1)(a) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

PE shall not exceed 0.96 pound per hour and 4.2 tons per year. (Stack Emissions)

Applicable Compliance Method:

The PE hourly limitation was developed based upon emission factors from US EPA's WebFIRE for SCC 3-04-007-06 and 3-04-003-50.

If required, the permittee shall demonstrate compliance with the hourly PE limitation through the results of emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

b. Emission Limitation:

VOC emissions shall not exceed 7.15 pounds per hour and 31.31 tons per year. (Stack Emissions)

Applicable Compliance Method:

The VOC hourly limitation was developed based upon emission factors submitted by the facility.

If required, the permittee shall demonstrate compliance with the hourly VOC limitation through the results of emission testing in accordance with Methods 1-4, and 18 or 25/25A, as appropriate, of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

c. Emission Limitation:

Visible PE of fugitive dust shall not exceed 5% opacity as a 3-minute average.

Visible PE from any stack shall not exceed 20% opacity, as a 3-minute average, except as provided by rule.



Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation:

VOC emissions shall not exceed 1.01 pounds per hour and 4.4 tons per year. (Fugitive Emissions)

Applicable Compliance Method:

The VOC hourly limitation was developed based upon emission factors submitted by the facility.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

e. Emission Limitation:

PE shall not exceed 0.38 pound per hour and 1.6 tons per year. (Fugitive Emissions)

Applicable Compliance Method:

The PE hourly limitation was developed based upon emission factors from US EPA's WebFIRE for SCC 3-04-007-06 and SCC 3-04-003-50.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

g) Miscellaneous Requirements

- (1) None.

3. P907, Foundry core sand reclamation unit.

Operations, Property and/or Equipment Description:

Foundry core sand reclamation unit, consisting of the sand reclaimer, conveyors, hoppers, screen vibrator and elevator.

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. All.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) | <p>Particulate emissions (PE) shall not exceed 2.58 pounds per hour and 11.3 tons per year. (stack emissions)</p> <p>Fugitive PE shall not exceed 0.11 pound per hour.</p> <p>Combined volatile organic compound (VOC) emissions shall not exceed 1.78 pounds per hour (0.38 pound per hour fugitive and 1.4 pounds per hour stack emissions) and 7.79 tons per year. (fugitive + stack emissions)</p> <p>Phenol emissions shall not exceed 0.005 pounds per hour and 0.013 tons per year.</p> <p>0.01 grain of PE per dry standard cubic</p> |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>foot (dscf) of exhaust gas or no visible PE from the control device exhaust stack, (whichever is less stringent).</p> <p>Visible PE of fugitive dust shall not exceed 5% opacity, as a 3-minute average.</p> <p>See b)(2)a below.</p> |
| b. | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| c. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | <p>Exempt.</p> <p>Not located in an area specified in Appendix A of OAC rule 3745-17-08.</p> |
| d. | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| e. | OAC rule 3745-31-05(D) | <p>Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation.</p> <p>Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation.</p> <p>Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation.</p> <p>See 3 of Section B. Facility-Wide Terms and Conditions.</p> |

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

c) Operational Restrictions

- (1) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.
- (2) The permittee shall only fire natural gas as fuel in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 7.5 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;

- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

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

- (3) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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.

- (4) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. The total amount of sand charged or handled in the sand reclaimers, in pounds or tons.
- 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 identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

- (4) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
- c. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - d. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - e. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.
- f) Testing Requirements
- (1) Compliance with the emission limitation(s) in Section b)(1)(a) of these terms and conditions shall be determined in accordance with the following method(s):
- a. Emission Limitation:

PE shall not exceed 2.58 pounds per hour and 11.3 tons per year. (stack emissions)

Fugitive PE shall not exceed 0.11 pound per hour.

0.01 grain of PE per dry standard cubic foot (dscf) of exhaust gas

Applicable Compliance Method:

The PE hourly stack limitation was developed based upon the results of emission tests performed at similar sources. The PE fugitive limitation was based upon a capture efficiency of 99%.

If required, the permittee shall demonstrate compliance with the hourly PE stack limitation and exhaust gas concentration limitation through the results of emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly stack mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.
 - b. Emission Limitation:

Combined VOC emissions shall not exceed 1.78 pounds per hour and 7.79 tons per year. (stack + fugitive emissions)

VOC emissions shall not exceed 1.4 pounds per hour. (stack emissions)

Fugitive VOC emissions shall not exceed 0.38 pound per hour.

Applicable Compliance Method:

Hourly VOC limitation = \sum Hourly Fugitive + Hourly Stack Emissions

The VOC hourly stack limitation was developed based upon the results of emission tests performed at similar sources. The VOC fugitive limitation was based upon a capture efficiency of 99%.

If required, the permittee shall demonstrate compliance with the hourly VOC stack limitation through the results of emission testing in accordance with Methods 1-4 and 18 or 25/25A, as appropriate, of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

c. Emission Limitation:

Phenol emissions shall not exceed 0.005 pounds per hour and 0.013 tons per year.

Applicable Compliance Method:

The phenol hourly limitation was developed based upon the emission factor of 0.00154 pounds per ton of sand. This emission factor was based on the results of emission tests.

If required, the permittee shall demonstrate compliance with the hourly phenol limitation through the results of emission testing in accordance with Methods 1-4, and 18 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the emission factor by the maximum allowable sand usage (17,000 tons of sand per year) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

d. Emission Limitation:

Visible PE of fugitive dust shall not exceed 5% opacity, as a 3-minute average.

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.



e. Emission Limitation:

no visible PE from the control device exhaust stack

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22.

g) Miscellaneous Requirements

(1) None.

4. P908, Sand break down line.

Operations, Property and/or Equipment Description:

Sand break down line, consisting of five belt conveyors, elevators, surge hopper, three vibra mills, and two 60-ton silos.

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 operations(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. 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) | Combined particulate emissions (PE) shall not exceed 1.6 pounds per hour (0.4 pound per hour fugitive and 1.2 pounds per hour stack emissions) and 7.1 tons per year. (fugitive + stack emissions) 0.01 grain of PE per dry standard cubic foot (dscf) of exhaust gas or no visible PE from the control device exhaust stack, (whichever is less stringent). Visible PE of fugitive dust shall not exceed 5% opacity, as a 3-minute average. See b)(2)a below. |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| b. | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| c. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | Exempt. Not located in an area specified in Appendix A of OAC rule 3745-17-08. |
| d. | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |

(2) Additional Terms and Conditions

a. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 7.5 inches of water.

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

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and

- e. the findings and recommendations.

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

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

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

- (3) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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) 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.
- (2) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

- b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
- c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

f) Testing Requirements

- (1) Compliance with the emission limitation(s) in Section b)(1)(a) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

PE shall not exceed 1.6 pounds per hour (0.4 pound per hour fugitive and 1.2 pounds per hour stack emissions) and 7.1 tons per year.

0.01 grain of PE per dscf of exhaust gas

Applicable Compliance Method:

Hourly PE limitation = \sum Hourly Fugitive + Hourly Stack Emissions

The PE hourly stack limitation was developed based upon the results of emission tests performed at similar sources. The PE fugitive limitation was based upon a capture efficiency of 90%.

If required, the permittee shall demonstrate compliance with the hourly PE stack limitation and exhaust gas concentration limitation through the results of emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

b. Emission Limitation:

Visible PE of fugitive dust shall not exceed 5% opacity, as a 3-minute average.

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.



c. Emission Limitation:

no visible PE from the control device exhaust stack

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22.

g) Miscellaneous Requirements

(1) None.

5. P910, Bead blast operation

Operations, Property and/or Equipment Description:

Bead blast operation in an enclosed cabinet.

- 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 operations(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. 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) | Particulate emissions (PE) shall not exceed 0.64 pound per hour, or 2.8 tons per year. There shall be no visible PE from the baghouse stack serving this emissions unit. There shall be no visible emissions of fugitive dust from the enclosed cabinet. See b)(2)a below. |
| b. | OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| c. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | Exempt. Not located in an area specified in Appendix A of OAC rule 3745-17-08. |

- (2) Additional Terms and Conditions
 - a. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.
- c) Operational Restrictions
 - (1) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.
 - (2) The blasting media used in this emissions unit, shall be a non-silica based material.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall perform weekly checks, when the emissions unit is in operation, for any visible particulate emissions from the stack serving this emissions unit and for any visible emissions of fugitive dust from the area immediately above the capture system 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. the total duration of any visible emissions incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
- e) Reporting Requirements
 - (1) 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.
 - (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
 - a. all days during which any visible emissions of fugitive dust were observed from the stack serving this emissions unit and from the area immediately above the capture system serving this emissions unit; and
 - b. any corrective actions taken to eliminate the visible 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 0.64 pound per hour, or 2.8 tons per year.

Applicable Compliance Method:

The PE hourly limitation was developed based upon the emission factor of 15.5 pounds per ton of iron castings throughput, from an Article in the January 1972 issue of Modern Castings, written by Bernard S. Gutow.

If required, the permittee shall demonstrate compliance with the hourly PE limitation through the results of emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

b. Emission Limitation:

No visible PE from the baghousestack serving this emissions unit.

No visible emissions of fugitive dust from the enclosed cabinet.

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22.

g) Miscellaneous Requirements

(1) None.

6. P920, Shotblasting Operation

Operations, Property and/or Equipment Description:

Two shotblast units tied to a wet scrubber.

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(A)(3) | Particulate emissions (PE) shall not exceed 0.56 pound per hour and 2.44 tons per year. 0.01 grain of PE per dry standard cubic foot (dscf) of exhaust gas or no visible PE from the control device exhaust stack, (whichever is less stringent). See b)(2)a. below. |
| b. | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| c. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | Exempt. Not located in an area specified in Appendix A of OAC rule 3745-17-08. |
| d. | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|--|-------------------------------|---|
| | | limitation established pursuant to OAC rule 3745-31-05(A)(3). |

(2) Additional Terms and Conditions

a. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the wet scrubber at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall be between 6 to 10 pounds per square inch (gauge).

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge) during operation of this/these emissions unit(s), including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation

ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

These range(s) and/or limit(s) for the pressure drop are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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) 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.
- (2) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the wet scrubber during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
 - c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the pressure drop into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and

- c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or 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. Emission Limitation:

PE shall not exceed 0.56 pound per hour, or 2.44 tons per year.

0.01 grain of PE per dscf of exhaust gas

Applicable Compliance Method:

The PE hourly limitation was developed based upon outlet grain loading of 0.01 grain of PE per dscf of exhaust gas.

If required, the permittee shall demonstrate compliance with the hourly PE limitation exhaust gas concentration through the results of emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

- b. Emission Limitation:

No visible PE from the control device exhaust stack.

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22.

- c. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.



Final Permit-to-Install and Operate
General Aluminum
Permit Number: P0119245
Facility ID: 1667070012
Effective Date: 12/1/2015

- g) Miscellaneous Requirements
 - (1) None.

7. Emissions Unit Group -Aluminum Reverberator Furnaces: P901,P902,P903,P905,

| EU ID | Operations, Property and/or Equipment Description |
|--------------|---|
| P901 | Natural gas fired Aluminum Reverberator Furnace #3, 2.5 MMBtu/hr heat input capacity and 2.0 tons/hr melt capacity. |
| P902 | Natural gas fired Aluminum Reverberator Furnace #1, 21 MMBtu heat input capacity and 4.5 tons/hr melt capacity. |
| P903 | Natural gas fired Aluminum Reverberator Furnace #2, 21 MMBtu heat input capacity and 4.5 tons/hr melt capacity. |
| P905 | Natural gas fired Aluminum Reverberator Furnace #5, 4 MMBtu/hr heat input capacity and 1.5 tons/hr melt capacity. |

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. All.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) (Requirements for emissions unit P901) | Nitrogen oxides (NOx) emissions shall not exceed 0.54 pound per hour and 2.40 tons per year. Volatile organic compound (VOC) emissions shall not exceed 0.04 pound per hour and 0.18 ton per year. Fluoride (F) emissions shall not exceed 0.004 pound per hour and 0.018 ton per year. |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>Hydrogen fluoride (HF) emissions shall not exceed 0.004 pound per hour and 0.018 ton per year.</p> <p>Particulate emissions (PE) shall not exceed 0.48 pound per hour and 2.10 tons per year.</p> <p>See b)(2)a. through b)(2)e. below.</p> |
| b. | <p>OAC Rule 3745-31-05(A)(3) (Requirements for emissions unit P902)</p> | <p>NO_x emissions shall not exceed 1.66 pounds per hour and 7.30 tons per year.</p> <p>VOC emissions shall not exceed 0.12 pound per hour and 0.53 ton per year.</p> <p>F emissions shall not exceed 0.014 pound per hour and 0.06 ton per year.</p> <p>HF emissions shall not exceed 0.014 pound per hour and 0.06 ton per year.</p> <p>PE shall not exceed 1.46 pounds per hour and 6.37 tons per year.</p> <p>See b)(2)a. through b)(2)e. below.</p> |
| c. | <p>OAC Rule 3745-31-05(A)(3) (Requirements for emissions unit P903)</p> | <p>NO_x emissions shall not exceed 1.19 pounds per hour and 5.22 tons per year.</p> <p>VOC emissions shall not exceed 0.08 pound per hour and 0.36 ton per year.</p> <p>F emissions shall not exceed 0.010 pound per hour and 0.044 ton per year.</p> <p>HF emissions shall not exceed 0.010 pound per hour and 0.044 ton per year.</p> <p>PE shall not exceed 1.05 pounds per hour and 4.60 tons per year.</p> <p>See b)(2)a. through b)(2)e. below.</p> |
| e. | <p>OAC Rule 3745-31-05(A)(3) (Requirements for emissions unit P905)</p> | <p>NO_x emissions shall not exceed 0.31 pound per hour and 1.34 tons per year.</p> <p>VOC emissions shall not exceed 0.02 pound per hour and 0.09 ton per year.</p> |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>F emissions shall not exceed 0.002 pound per hour and 0.009 ton per year.</p> <p>HF emissions shall not exceed 0.002 pound per hour and 0.009 ton per year.</p> <p>PE shall not exceed 0.27 pound per hour and 1.18 tons per year.</p> <p>See b)(2)a. through b)(2)e. below.</p> |
| f. | OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| g. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | Exempt. Not located in an area specified in Appendix A of OAC rule 3745-17-08. |
| h. | OAC rule 3745-31-05(D) | <p>Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation.</p> <p>Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation.</p> <p>Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation.</p> <p>See 3 of Section B. Facility-Wide Terms and Conditions.</p> |
| i. | 40 CFR 63, Subpart RRR | Exempt. An area source that only charges clean charge, internal scrap, or customer returns, as defined in 40 CFR 63.1503 and does not operate a thermal chip dryer. |

(2) Additional Terms and Conditions

- a. Visible PE of fugitive dust shall not exceed 5% opacity, as a 3-minute average.

- b. Visible PE from any stack shall not exceed 5% opacity, as a 3-minute average.
 - c. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.
 - d. The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:
 - i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and
 - ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.
 - e. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.
- c) Operational Restrictions
- (1) The permittee shall only combust natural gas as fuel in this emissions unit.
 - (2) The emissions unit shall be charged with only clean charge, internal scrap, or customer returns, as defined in 40 CFR 63.1503.
 - (3) Chlorine shall not be added for demagging the aluminum.
 - (4) Alloying, if any performed in this emissions unit, shall be done employing only clean materials.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. The total amount of aluminum charged in the furnace, in pounds or tons.
 - (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(2) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

- b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
- c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or 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. Emission Limitation:

PE emissions shall not exceed 0.48 pounds per hour and 2.10 tons per year.
(P901)

PE emissions shall not exceed 1.46 pounds per hour and 6.39 tons per year
(P902)

PE emissions shall not exceed 1.05 pounds per hour and 4.60 tons per year
(P903)

PE emissions shall not exceed 0.27 pounds per hour and 1.18 tons per year
(P905)

Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly PE limitation based on the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

- b. Emission Limitation:

NO_x emissions shall not exceed 0.54 pounds per hour and 2.40 tons per year.
(P901)

NO_x emissions shall not exceed 1.66 pounds per hour and 7.30 tons per year
(P902)

NO_x emissions shall not exceed 1.19 pounds per hour and 5.22 tons per year
(P903)

NO_x emissions shall not exceed 0.31 pounds per hour and 1.34 tons per year
(P905)

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly NO_x limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 7 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

c. Emission Limitation:

VOC emissions shall not exceed 0.04 pound per hour and 0.18 ton per year.
(P901)

VOC emissions shall not exceed 0.12 pound per hour and 0.53 ton per year
(P902)

VOC emissions shall not exceed 0.08 pound per hour and 0.36 ton per year
(P903)

VOC emissions shall not exceed 0.02 pound per hour and 0.09 ton per year
(P905)

Applicable Compliance Method:

The VOC hourly limitation was developed based upon the emission factor of 2.17 pounds per ton of aluminum poured. This emission factor was based on the results of emission tests performed at similar sources.

If required, the permittee shall demonstrate compliance with the hourly VOC limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 18 or 25/25A, as appropriate, of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

d. Emission Limitation:

F emissions shall not exceed 0.004 pound per hour and 0.018 ton per year.
(P901)

F emissions shall not exceed 0.014 pound per hour and 0.06 ton per year (P902)

F emissions shall not exceed 0.010 pound per hour and 0.044 ton per year
(P903)

F emissions shall not exceed 0.002 pound per hour and 0.01 ton per year (P905)

HF emissions shall not exceed 0.004 pound per hour and 0.018 ton per year.
(P901)



Final Permit-to-Install and Operate

General Aluminum

Permit Number: P0119245

Facility ID: 1667070012

Effective Date: 12/1/2015

HF emissions shall not exceed 0.014 pound per hour and 0.06 ton per year (P902)

HF emissions shall not exceed 0.010 pound per hour and 0.044 ton per year (P903)

HF emissions shall not exceed 0.002 pound per hour and 0.01 ton per year (P905)

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly F and HF limitations based on the results of emission testing conducted in accordance with Methods 1-4 and 13A/B of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

e. Emission Limitation:

5% opacity as a 3-minute average (stack and fugitive emissions)

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None

8. Emissions Unit Group –Casting, Pouring and Cooling Line: F001,F002,F003,

| EU ID | Operations, Property and/or Equipment Description |
|--------------|---|
| F001 | 11 Floor pouring and cooling operations from furnaces #3 (P901) and #4 (P904). |
| F002 | Pouring and cooling line #1. Six devices with two molds each on a rotating turn table. |
| F003 | Pouring and cooling line # 2. Eight devices with two molds each an a rotating turn table. |

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. All.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) (Requirements for emissions unit F001) | Sulfur dioxide (SO ₂) emissions shall not exceed 0.64 pound per hour and 2.79 tons per year. Carbon monoxide (CO) emissions shall not exceed 1.79 pounds per hour and 7.84 tons per year. Volatile organic compound (VOC) emissions shall not exceed 2.71 pounds per hour and 18.45 tons per year. Particulate emissions (PE) shall not exceed 0.43 pound per hour and 1.88 tons per year. Phenol emissions shall not exceed |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| | | <p>0.05 pound per hour and 0.22 ton per year.</p> <p>See b)(2)a. through b)(2)e. below.</p> |
| b. | <p>OAC Rule 3745-31-05(A)(3) (Requirements for emissions unit F002)</p> | <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.41 pound per hour and 1.80 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 1.14 pounds per hour and 5.00 tons per year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 1.74 pounds per hour and 18.45 tons per year.</p> <p>Particulate emissions (PE) shall not exceed 0.27 pound per hour and 1.18 tons per year.</p> <p>Phenol emissions shall not exceed 0.03 pound per hour and 0.13 ton per year.</p> <p>See b)(2)a. through b)(2)e. below.</p> |
| c. | <p>OAC Rule 3745-31-05(A)(3) (Requirements for emissions unit F003)</p> | <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.70 pound per hour and 7.45 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 4.76 pounds per hour and 20.85 tons per year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 7.23 pounds per hour and 18.45 tons per year.</p> <p>Particulate emissions (PE) shall not exceed 1.13 pounds per hour and 4.95 tons per year.</p> <p>Phenol emissions shall not exceed 0.13 pound per hour and 0.57 ton per year.</p> <p>See b)(2)a. through b)(2)e. below.</p> |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| d. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | Exempt. Not located in an area specified in Appendix A of OAC rule 3745-17-08. |
| e. | OAC rule 3745-31-05(D) | Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation. Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation. Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation. See 3 of Section B. Facility-Wide Terms and Conditions. |

(2) Additional Terms and Conditions

- a. Visible PE of fugitive dust shall not exceed 5% opacity, as a 3-minute average.
- b. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. These measures shall include, but not be limited to, the following:
 - i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and
 - ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.
- c. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.
- d. For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such

additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

- e. Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC 3745-31-05(A)(3).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly 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.) serving this emissions unit. The presence or absence of any visible fugitive 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 location and 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.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
 - a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible 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 0.43 pound per hour and 1.88 tons per year. (F001)
PE shall not exceed 0.27 pound per hour and 1.18 tons per year. (F002)
PE shall not exceed 1.13 pounds per hour and 4.95 tons per year. (F003)

Applicable Compliance Method:

The PE hourly limitation was developed based upon the emission factor of 0.34 pounds per ton of aluminum melted. This emission factor was based on the results of emission tests performed at similar sources.

If required, the permittee shall demonstrate compliance with the hourly PE limitation based on the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

b. Emission Limitation:

SO₂ emissions shall not exceed 0.64 pound per hour and 2.79 tons per year.
(F001)

SO₂ emissions shall not exceed 0.41 pound per hour and 1.80 tons per year.
(F002)

SO₂ emissions shall not exceed 0.70 pound per hour and 7.45 tons per year.
(F003)

Applicable Compliance Method:

The SO₂ hourly limitation was developed based upon the emission factor of 0.51 pounds per ton of aluminum melted. This emission factor was based on the results of emission tests performed at similar sources.

If required, the permittee shall demonstrate compliance with the hourly SO₂ limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

c. Emission Limitation:

CO emissions shall not exceed 1.79 pounds per hour and 7.84 tons per year.
(F001)

CO emissions shall not exceed 1.14 pounds per hour and 5.00 tons per year.
(F002)

CO emissions shall not exceed 4.76 pounds per hour and 20.85 tons per year.
(F003)

Applicable Compliance Method:

The CO hourly limitation was developed based upon the emission factor of 1.43 pounds per ton of aluminum melted. This emission factor was based on the results of emission tests performed at similar sources.

If required, the permittee shall demonstrate compliance with the hourly CO limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

d. Emission Limitation:

VOC emissions shall not exceed 2.71 pounds per hour and 18.45 tons per year. (F001)

VOC emissions shall not exceed 1.74 pounds per hour and 18.45 tons per year. (F002)

VOC emissions shall not exceed 7.23 pounds per hour and 18.45 tons per year. (F003)

Applicable Compliance Method:

The VOC hourly limitation was developed based upon the emission factor of 2.17 pounds per ton of aluminum melted. This emission factor was based on the results of emission tests performed at similar sources.

If required, the permittee shall demonstrate compliance with the hourly VOC limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 18 or 25/25A, as appropriate, of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the pound of VOC per ton of aluminum melted emission factor by the annual facility-wide throughput limit of 17,000 tons per year and dividing the result by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the facility-wide metal throughput limitation.

e. Emission Limitation:

Visible PE of fugitive dust shall not exceed 5% opacity, as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

f. Emission Limitation:

Phenol emissions shall not exceed 0.05 pound per hour and 0.22 ton per year. (F001)



Phenol emissions shall not exceed 0.03 pound per hour and 0.13 ton per year.
(F002)

Phenol emissions shall not exceed 0.13 pound per hour and 0.57 ton per year.
(F003)

Applicable Compliance Method:

The phenol hourly limitation was developed based upon the emission factor of 0.04 pounds per ton of aluminum melted. This emission factor was based on the results of emission tests performed at similar sources.

If required, the permittee shall demonstrate compliance with the hourly phenol limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 18 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly allowable emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be ensured provided compliance is maintained with the hourly limitation.

g) Miscellaneous Requirements

- (1) None.

**9. Emissions Unit Group -Core Making Machines:
P909,P911,P912,P913,P914,P915,P916,P917,P918,P919,**

| EU ID | Operations, Property and/or Equipment Description |
|--------------|--|
| P909 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, ten hoppers, ten core machines, mixers and conveyors. |
| P911 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P912 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P913 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P914 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P915 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P916 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P917 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P918 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |
| P919 | Core making operations, using sand and isoset with a SO ₂ reactant. Consisting of a day silo, heater/cooler, elevators, hoppers, core machine, mixer and conveyors. |

- 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. All.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operations(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. 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) | <p>Total combined emissions from the emission units P909 and P911 through P919 shall not exceed the following:</p> <p>Combined particulate emissions (PE) shall not exceed 6.7 pounds per hour and 29.4 tons per year. (fugitive + stack emissions)</p> <p>Combined volatile organic compound (VOC) emissions shall not exceed 1.18 pounds per hour (0.12 pound per hour fugitive and 1.17 pounds per hour stack emissions) and 5.16 tons per year. (fugitive + stack emissions)</p> <p>Combined sulfur dioxide (SO₂) emissions shall not exceed 0.22 pound per hour (0.214 pound per hour stack emissions) and 0.96 tons per year. (stack + fugitive emissions)</p> <p>The scrubber shall have a control efficiency which is at least 98%, by weight, for SO₂.</p> <p>See b)(2)a. below.</p> |
| b. | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20% opacity, as a 3-minute average, except as provided by rule. |
| c. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | <p>Exempt.</p> <p>Not located in an area specified in Appendix A of OAC rule 3745-17-08.</p> |
| d. | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC Rule 3745-31-05(A)(3). |
| e. | OAC rule 3745-31-05(D) | <p>Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation.</p> <p>Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation.</p> |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|--|-------------------------------|---|
| | | <p>Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation.</p> <p>See 3 of Section B. Facility-Wide Terms and Conditions.</p> |

(2) Additional Terms and Conditions

a. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

c) Operational Restrictions

a. The emissions from the emissions units listed above shall be vented to the wet scrubber and baghouse when one or more of the emissions units are in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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.

- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 7.5 inches of water.
- (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

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

- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pH of the scrubber liquid, that shall be maintained in order to demonstrate compliance, is between 8.5 and 14.0.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid pH during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid's pH on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- f. a description of the corrective action;
- g. the date the corrective action was completed;

- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pH readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

These range(s) and/or limit(s) for the pH are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pH based upon information obtained during future performance tests that demonstrate compliance with the allowable SO₂ emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

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 identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

- b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.
- (4) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
- a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (5) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the wet scrubber during the 12-month reporting period for this/these emissions unit(s):
- a. each period of time (start time and date, and end time and date) when the liquid pH was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
 - c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the scrubber liquid pH into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

- e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of 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. Emission Limitation:

Combined PE shall not exceed 6.7 pounds per hour and 29.4 tons per year. (fugitive + stack emissions)

Applicable Compliance Method:

Hourly PE limitation = \sum Hourly Fugitive + Hourly Stack Emissions

The PE hourly limitation was developed based upon the emission factor of 1.02 pounds per ton of sand processed castings throughput, from an Article in the January 1972 issue of Modern Castings, written by Bernard S. Gutow.

If required, the permittee shall demonstrate compliance with the hourly PE stack limitation through the results of emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

- b. Emission Limitation:

Combined VOC emissions shall not exceed 1.18 pounds per hour (0.12 pound per hour fugitive and 1.17 pounds per hour stack emissions) and 5.16 tons per year. (fugitive + stack emissions)

Applicable Compliance Method:

Hourly VOC limitation = \sum Hourly Fugitive + Hourly Stack Emissions

The VOC hourly stack limitation was developed based upon the emission factor of 0.018 pounds per ton of sand processed based on the results of a study of VOC emissions from various manufacturers pep set no-bake binders.

If required, the permittee shall demonstrate compliance with the hourly VOC stack limitation through the results of emission testing in accordance with Methods 1-4 and 18 or 25/25A, as appropriate, of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

c. Emission Limitation:

Combined SO₂ emissions shall not exceed 0.22 pound per hour (0.214 pound per hour stack emissions) and 0.96 tons per year. (stack + fugitive emissions)

Applicable Compliance Method:

Hourly SO₂ limitation = \sum Hourly Fugitive + Hourly Stack Emissions

The SO₂ hourly stack limitation was developed based upon the emission factor of 0.036 pounds per ton of sand processed from results of emission tests performed at similar sources.

If required, the permittee shall demonstrate compliance with the hourly SO₂ stack limitation through the results of emission testing in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly mass emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, compliance with the annual limitation shall be ensured if compliance with the hourly limitation is maintained.

d. Emission Limitation:

The scrubber shall have a control efficiency which is at least 98%, by weight, for SO₂.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the SO₂ control efficiency limitation above in accordance with the Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

e. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.



Final Permit-to-Install and Operate
General Aluminum
Permit Number: P0119245
Facility ID: 1667070012
Effective Date: 12/1/2015

g) Miscellaneous Requirements

- (1) None.

10. Emissions Unit Group -Furnaces: P922,P923,

| EU ID | Operations, Property and/or Equipment Description |
|--------------|--|
| P922 | Furnace #4 – 4.0 MMBtu/hr natural gas-fired aluminum reverberatory melting furnace |
| P923 | Furnace #6 – 7.0 MMBtu/hr natural gas-fired aluminum reverberatory melting furnace |

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. All, except d)(3) and e)(4).

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|---|--|
| a. | OAC rule 3745-31-05(A)(3), as effective 6/30/2008 | <p>Particulate emissions (PE) shall not exceed 0.582 pound per ton of aluminum charged.</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 1.032 pounds per ton of aluminum charged.</p> <p>Carbon monoxide (CO) emissions shall not exceed 84.0 pounds per million cubic feet of natural gas combusted.</p> <p>Hydrogen fluoride (HF) emissions shall not exceed 0.12 pound per ton of aluminum charged.</p> <p>See b)(2)a. below.</p> |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| b. | OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/2008 | The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, NOx, CO, and HF emissions limitations from this air contaminants source since the potential to emit is each less than 10 tons per year. See b)(2)b. below. |
| c. | ORC 3704.03(T) and OAC rule 3745-31-05(A)(3) | Volatile organic compound (VOC) emissions shall not exceed 1.673 pounds per ton of aluminum charged. |
| d. | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| e. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | Exempt. Not located in an area specified in Appendix A of OAC rule 3745-17-08. |
| f. | OAC rule 3745-17-11(B) | PE shall not exceed 5.38 pounds per hour. (based on 3,000 pounds/hour maximum process weight rate) This limit applies after the SIP is approved as noted below in b)(2)b. removing the BAT limits. |
| g. | OAC rule 3745-31-05(D) | Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation. Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation. Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation. See 3 of Section B. Facility-Wide Terms and Conditions. |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|--|
| h. | 40 CFR 63, Subpart RRR | Exempt. An area source that only charges clean charge, internal scrap, or customer returns, as defined in 40 CFR 63.1503 and does not operate a thermal chip dryer. |

(2) Additional Terms and Conditions

- a. The BAT emission limits apply until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than ten tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than ten tons per year BAT exemption) into the Ohio SIP.

c) Operational Restrictions

- (1) The permittee shall only combust natural gas as fuel in this emissions unit.
- (2) Neither demagging nor degassing shall be performed in this emissions unit. Only fluxing, performed with the addition of dry powdered fluxes, for the sole purpose of preventing, reducing, and removing oxide impurities from the aluminum melt, shall be permitted in this emissions unit.
- (3) The emissions unit shall be charged with only clean charge, internal scrap, or customer returns, as defined in 40 CFR 63.1503.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. The total amount of aluminum charged in the furnace, in pounds or tons.
- (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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.

- (3) 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 identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(2) above:

- a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.
- (4) 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 Permit Evaluation Report (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.
- 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:

PE shall not exceed 0.582 pound per ton of aluminum charged.

PE shall not exceed 5.38 pounds per hour.

Applicable Compliance Method:

If required, compliance with the PE limitations above shall be determined based on the results of emission testing conducted in accordance with Methods 1-5, of 40 CFR Part 60, Appendix A.
 - b. Emissions Limitation:

NOx emissions shall not exceed 1.032 pounds per ton of aluminum charged.

Applicable Compliance Method:

If required, compliance with the NOx emission limitation shall be determined by based on the results of emission testing conducted in accordance with Methods 1-4, and 7 of 40 CFR Part 60, Appendix A.
 - c. Emissions Limitation:

CO emissions shall not exceed 84.0 pounds per million cubic feet of natural gas combusted.

Applicable Compliance Method:

The CO emission limitation above was developed based upon the emission factor in USEPA's AP-42, Fifth Edition, Table 1.4-1.

If required, compliance with the CO emission factor limitation above shall be determined based on the results of emission testing conducted in accordance with Methods 1-4, and 10 of 40 CFR Part 60, Appendix A.

d. Emissions Limitation:

HF emissions shall not exceed 0.12 pound per ton of aluminum charged.

Applicable Compliance Method:

If required, compliance with the HF emission limitation above shall be determined based on the results of emission testing conducted in accordance with Methods 1-4, and 26 or 26A of 40 CFR Part 60, Appendix A.

e. Emissions Limitation:

VOC emissions shall not exceed 1.673 pounds per ton of aluminum charged.

Applicable Compliance Method:

If required, compliance with the VOC emission limitation above shall be determined based on the results of emission testing conducted in accordance with Methods 1-4, and 18 or 25/25A of 40 CFR Part 60, Appendix A.

f. Emissions Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

- (1) None.

11. Emissions Unit Group -Pouring/Cooling Turntables: F004,F005,

| EU ID | Operations, Property and/or Equipment Description |
|--------------|--|
| F004 | 1100 Pouring/Cooling Turntable |
| F005 | 1500 Pouring/Cooling Turntable |

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. All.

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| a. | OAC rule 3745-31-05(A)(3), as effective 6/30/2008 | Sulfur dioxide (SO ₂) emissions shall not exceed 0.511 pounds per ton of aluminum. Particulate emissions (PE) shall not exceed 0.34 pound per ton of aluminum. See b)(2)a. below. |
| b. | OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/2008 | TheBATrequirementsunderOACrule3745-31-05(A)(3)donotapplytothe SO ₂ , and particulateemissions limitations fromthisaircontaminantsourcesincethe potential to emitis each less than 10 tons per year. See b)(2)b. below. |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| c. | ORC 3704.03(T) | <p>Volatile organic compound (VOC) emissions shall not exceed 2.17 pounds per ton of aluminum.</p> <p>Carbon monoxide (CO) emissions shall not exceed 1.43 pounds per ton of aluminum.</p> |
| d. | OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) | <p>Exempt.</p> <p>Not located in an area specified in Appendix A of OAC rule 3745-17-08.</p> |
| e. | OAC rule 3745-31-05(D) | <p>Combined annual emissions from the entire facility shall not exceed 96.3 tons per year of VOC, as a rolling, 12-month summation.</p> <p>Total maximum annual production throughput from the entire facility shall not exceed 17,000 tons of aluminum per year, as a rolling, 12-month summation.</p> <p>Total maximum annual sand usage from the entire facility shall not exceed 17,000 tons per year, as a rolling, 12-month summation.</p> <p>See 3 of Section B. Facility-Wide Terms and Conditions.</p> |

(2) Additional Terms and Conditions

- a. The BAT emission limits apply until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than ten tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than ten tons per year BAT exemption) into the Ohio SIP.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly 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.) serving this emissions

unit. The presence or absence of any visible fugitive 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 location and 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.

- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible 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:
SO₂ emissions shall not exceed 0.511 pounds per ton of aluminum.
Applicable Compliance Method:
The emission SO₂ emission limitation above was developed based upon the emission factor as submitted by the permittee.
If required, the permittee shall demonstrate compliance with the SO₂ emission limitation above in accordance with the Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.
 - b. Emissions Limitation:
CO emissions shall not exceed 1.43 pounds per ton of aluminum.
Applicable Compliance Method:
The emission CO emission limitation was developed based upon the emission factor as submitted by the permittee.
If required, the permittee shall demonstrate compliance with the CO emission limitation above in accordance with the Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.
 - c. Emissions Limitation:
VOC emissions shall not exceed 2.17 pounds per ton of aluminum.
Applicable Compliance Method:
The VOC emission limitation was developed based upon the emission factor as submitted by the permittee.



If required, the permittee shall demonstrate compliance with the VOC emission limitation above in accordance with the Methods 1-4 and 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

d. Emissions Limitation:

PE shall not exceed 0.34 pound per ton of aluminum.

Applicable Compliance Method:

The PE limitation was developed based upon the emission factor as submitted by the permittee.

If required, the permittee shall demonstrate compliance with the PE limitation above in accordance with the Methods 1-5 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.