



John R. Kasich, Governor
 Mary Taylor, Lt. Governor
 Scott J. Nally, Director

7/19/2013

Certified Mail

Kurt Blemaster
 OHIO ALUMINUM INDUSTRIES INC.
 4840 Warner Road
 Garfield Heights, OH 44125

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

Facility ID: 1318226416
 Permit Number: P0060276
 Permit Type: Renewal
 County: Cuyahoga

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

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

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/dapc/permitsurvey.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 Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: CDAQ



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
OHIO ALUMINUM INDUSTRIES INC.**

Facility ID:	1318226416
Permit Number:	P0060276
Permit Type:	Renewal
Issued:	7/19/2013
Effective:	7/19/2013
Expiration:	7/19/2023



**Division of Air Pollution Control
Permit-to-Install and Operate
for
OHIO ALUMINUM INDUSTRIES INC.**

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. What does this permit-to-install and operate ("PTIO") allow me to do?	4
2. Who is responsible for complying with this permit?	4
3. What records must I keep under this permit?	4
4. What are my permit fees and when do I pay them?	4
5. When does my PTIO expire, and when do I need to submit my renewal application?	4
6. What happens to this permit if my project is delayed or I do not install or modify my source?	5
7. What reports must I submit under this permit?	5
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?	5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	6
13. Can I transfer this permit to a new owner or operator?	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
15. What happens if a portion of this permit is determined to be invalid?	7
B. Facility-Wide Terms and Conditions	8
C. Emissions Unit Terms and Conditions	10
1. P004, Sand reclamation unit	11



Final Permit-to-Install and Operate
OHIO ALUMINUM INDUSTRIES INC.
Permit Number: P0060276
Facility ID: 1318226416
Effective Date: 7/19/2013

Authorization

Facility ID: 1318226416
Application Number(s): A0026994
Permit Number: P0060276
Permit Description: PTIO renewal permit for P004, a fluidized bed thermal reclamation unit for aluminum foundry sand controlled by a baghouse. PTI 13-03991 was issued on 4/17/03.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 7/19/2013
Effective Date: 7/19/2013
Expiration Date: 7/19/2023
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

OHIO ALUMINUM INDUSTRIES INC.
4840 WARNER ROAD
GARFIELD HEIGHTS, OH 44125

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

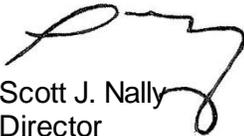
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erievue Plaza
Cleveland, OH 44114
(216)664-2297

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


Scott J. Nally
Director



Final Permit-to-Install and Operate
OHIO ALUMINUM INDUSTRIES INC.

Permit Number: P0060276

Facility ID: 1318226416

Effective Date: 7/19/2013

Authorization (continued)

Permit Number: P0060276

Permit Description: PTIO renewal permit for P004, a fluidized bed thermal reclamation unit for aluminum foundry sand controlled by a baghouse. PTI 13-03991 was issued on 4/17/03.

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

Emissions Unit ID:	P004
Company Equipment ID:	Sand reclamation unit
Superseded Permit Number:	13-03991
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
OHIO ALUMINUM INDUSTRIES INC.
Permit Number: P0060276
Facility ID: 1318226416
Effective Date: 7/19/2013

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. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. 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 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 Cleveland Division of Air Quality 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 submitting¹ 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 emissions 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.

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



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
OHIO ALUMINUM INDUSTRIES INC.
Permit Number: P0060276
Facility ID: 1318226416
Effective Date: 7/19/2013

B. Facility-Wide Terms and Conditions



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart ~~ZZZZ~~, National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.



Final Permit-to-Install and Operate
OHIO ALUMINUM INDUSTRIES INC.
Permit Number: P0060276
Facility ID: 1318226416
Effective Date: 7/19/2013

C. Emissions Unit Terms and Conditions



1. P004, Sand reclamation unit

Operations, Property and/or Equipment Description:

P004 - Gundgeon Bros. Ltd. Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit (foundry sand reclaim) controlled by a fabric-filter baghouse.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-03991 issued on 4/17/2003	0.102 lb/hr and 0.45 TPY of organic compounds (OC). 11.30 TPY of particulate emissions (PE) 1.63 lbs/hr and 7.14 TPY of carbon monoxide (CO) emissions. 2.61 lbs/hr and 11.43 TPY of SO ₂ emissions 0.02 lb/hr and 0.07 TPY of NO _x emissions The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), 3745-17-07(B)(1), and OAC rule 3745-17-11(B)



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a. below. See c)(1), c)(2), c)(3), and c)(4) below.
b.	OAC rule 3745-17-07(B)(1)	Visible particulate matter from any fugitive dust source shall not exceed 20% opacity, as a three-minute average.
c.	OAC rule 3745-17-08(B)	The control measures specified by this rule are equivalent to the control measures established pursuant to OAC Rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity, as a six-minute average, except as specified by rule.
e.	OAC rule 3745-17-11(B)	See b)(2)b. below

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible particulate emissions of fugitive dust. At a minimum, the permittee's employment of best available control measures shall consist of localized hooding vented to a baghouse to capture the fugitive particulate emissions.
- b. The uncontrolled mass rate of particulate emissions from this emission unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. Based on Table I of OAC rule 3745-17-11, the allowable PE limitation is 2.58 pounds per hour for this emissions unit.

c) Operational Restrictions

- (1) The pressure drop across the baghouse shall be maintained within the range of 2.0 to 6.0 inches of water while this emissions unit is in operation.
- (2) The operating temperature for the hot side of the Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit shall be maintained within the range of 500°F to 1300° F and the cool side shall be maintained within the range of 125° F to 200° F while this emissions unit is in operation.
- (3) All particulate emissions captured from this emissions unit shall be vented to the baghouse.



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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

(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 serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to eliminate the visible emissions.

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

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to eliminate the visible emissions.

(4) The permittee shall collect and record the operating temperature of the Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit for both the hot side and cool side temperatures each day when operating this emissions unit.



e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland (DAQ) 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall include in the annual PER the following information:
 - a. any period of time during which the pressure drop was out of specified range;
 - b. all days during which any visible emissions (stack or fugitive) were observed;
 - c. any corrective actions taken to eliminate visible emissions; and
 - d. any period of time in which the operating temperatures for both the hot and cool side of the Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit did not comply with the allowable range.

f) Testing Requirements

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

- a. Emission Limitation:
2.58 lbs/hr of PE

Applicable Compliance Method:

Compliance with the above emission limitation shall be determined by using the following equation using the maximum hourly process weight rate:

$$[\text{EF (lb PE/ ton sand processed)}] * [0.5 \text{ ton of processed sand / hour}] = \text{PE emissions (lb PE/hour)}$$

where: EF = 0.54 lbs PE / ton sand processed (with controls).

(emission factor from Table 12.13-2, AP-42, 5th edition)

If required, the permittee shall demonstrate compliance with the hourly allowable PE limitation above in accordance with the methods 1 through 5, as appropriate, of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval.

- b. Emission Limitation:
11.30 TPY of PE



Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

c. **Emission Limitation:**

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

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9 of 40 CFR Part 60, Appendix A.

d. **Emission Limitation:**

0.102 lb/hr of OC

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly allowable OC emission limitation above in accordance with methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

e. **Emission Limitation:**

0.45 TPY of OC

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

f. **Emission Limitation:**

1.63 lbs/hour of CO

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly allowable CO emission limitation above in accordance with method 10, as appropriate, of 40 CFR, Part 60, Appendix A.

g. **Emission Limitation:**

7.14 TPY of CO

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.



- h. Emission Limitation:
2.61 lbs/hour of SO₂

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly allowable SO₂ emission limitation above in accordance with method 6, as appropriate, of 40 CFR, Part 60, Appendix A.

- i. Emission Limitation:
11.43 TPY of SO₂

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- j. Emission Limitation:
Visible fugitive particulate emissions shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Reference Method 9 of 40 CFR 60, Appendix A.

- k. Emission Limitation:
0.02 lb/hr of NO_x

Applicable Compliance Method:

Compliance with the above emission limitation shall be determined by using the following equation using the maximum hourly process weight rate:

$$[\text{EF (lb NO}_x\text{/ ton sand processed)}] * [0.5 \text{ ton of processed sand / hour}] = \text{NO}_x \text{ emissions (lb NO}_x\text{/hour)}$$

where: EF = 0.031 lbs NO_x / ton sand processed

(emission factor from Table 11.19.1-2, AP-42, 5th edition)

If required, the permittee shall demonstrate compliance with the hourly allowable NO_x emission limitation above in accordance with method 7, as appropriate, of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval.

- l. Emission Limitation:
0.07 TPY of NO_x



Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

g) **Miscellaneous Requirements**

(1) None.