



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

8/14/2013

Evan Kirk  
Morris Material Handling - Kone Cranes  
213 INDUSTRIAL DRIVE  
Franklin, OH 45005

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1483040388  
Permit Number: P0115086  
Permit Type: Initial Installation  
County: Warren

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	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](http://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](http://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](http://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 Southwest Ohio Air Quality Agency at (513)946-7777 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: SWOQA



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Morris Material Handling - Kone Cranes**

Facility ID:	1483040388
Permit Number:	P0115086
Permit Type:	Initial Installation
Issued:	8/14/2013
Effective:	8/14/2013
Expiration:	10/27/2021





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
Morris Material Handling - Kone Cranes

**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. P001, B03 .....	11





**Final Permit-to-Install and Operate**  
Morris Material Handling - Kone Cranes  
**Permit Number:** P0115086  
**Facility ID:** 1483040388  
**Effective Date:** 8/14/2013

## Authorization

Facility ID: 1483040388  
Application Number(s): A0048251  
Permit Number: P0115086  
Permit Description: Initial PTIO for one (1) 2,104 pounds per hour abrasive grit blasting of metal parts operation with Global Finishing Solutions (GFS) Model DBC-48-6-3 fabric filter.  
Permit Type: Initial Installation  
Permit Fee: \$500.00  
Issue Date: 8/14/2013  
Effective Date: 8/14/2013  
Expiration Date: 10/27/2021  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Morris Material Handling - Kone Cranes  
213 INDUSTRIAL DRIVE  
Franklin, OH 45005

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

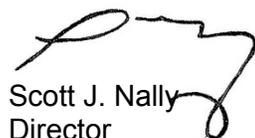
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Southwest Ohio Air Quality Agency  
250 William Howard Taft Rd.  
Cincinnati, OH 45219  
(513)946-7777

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**  
Morris Material Handling - Kone Cranes  
**Permit Number:** P0115086  
**Facility ID:** 1483040388  
**Effective Date:** 8/14/2013

## Authorization (continued)

Permit Number: P0115086

Permit Description: Initial PTIO for one (1) 2,104 pounds per hour abrasive grit blasting of metal parts operation with Global Finishing Solutions (GFS) Model DBC-48-6-3 fabric filter.

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

<b>Emissions Unit ID:</b>	<b>P001</b>
Company Equipment ID:	B03
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Morris Material Handling - Kone Cranes  
**Permit Number:** P0115086  
**Facility ID:** 1483040388  
**Effective Date:** 8/14/2013

## **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 Southwest Ohio Air Quality Agency 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<sup>1</sup> 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.

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<sup>1</sup>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**  
Morris Material Handling - Kone Cranes  
**Permit Number:** P0115086  
**Facility ID:** 1483040388  
**Effective Date:** 8/14/2013

## **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.



**Final Permit-to-Install and Operate**  
Morris Material Handling - Kone Cranes  
**Permit Number:** P0115086  
**Facility ID:** 1483040388  
**Effective Date:** 8/14/2013

## **C. Emissions Unit Terms and Conditions**



**1. P001, B03**

**Operations, Property and/or Equipment Description:**

2,104 pounds per hour abrasive grit blasting of metal parts operation with Global Finishing Solutions (GFS) Model DBC-48-6-3 cartridge style filter

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 11/30/01	Particulate Emissions (PE) at the control device outlet shall not exceed 0.030 grain per dry standard cubic foot of exhaust gases or there shall be no visible PE from the exhaust stack, whichever is less stringent.  Uncontrolled fugitive PE shall not exceed 0.68 pound per hour.  PE shall not exceed 3.55 tons per year (TPY) from the exhaust stack and uncontrolled fugitive emissions, combined.  Emissions of particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.39 pound per hour and



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		1.71 TPY from the exhaust stack and uncontrolled fugitive emissions, combined.  Emissions of particulate matter 2.5 microns and less in diameter (PM2.5) shall not exceed 0.04 pound per hour and 0.18 TPY from the exhaust stack and uncontrolled fugitive emissions, combined.  See b)(2)a., b)(2)c., and b)(2)d.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from this emissions unit shall not exceed 20 percent opacity as a three-minute average.
e.	OAC rule 3745-17-11(B)(1)	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 has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, these emission limitations/control measures no longer apply.



- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install and Operate (PTIO) P0115086 for this air contaminant source takes into account the following voluntary restrictions, including the use of any applicable air pollution control equipment, as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

- i. The emissions from this emissions unit shall be vented to a cartridge style filter at all times the emissions unit is in operation; and
- ii. PE shall not exceed 3.55 TPY, PM10 shall not exceed 1.71 TPY, and PM2.5 shall not exceed 0.18 TPY.

- c. The emissions from this emissions unit shall be vented to a cartridge-style filter at all times the emissions unit is in operation.

- d. The collection efficiency of hoods, fans, and/or other equipment to adequately enclose, contain, capture, vent, and control fugitive dust from this emissions unit shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The acceptable range for the pressure drop across the cartridge style filter shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the cartridge style filter 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 cartridge style filter 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. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

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 cartridge style filter 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 daily 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 District Office or Local Air Agency 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 identify in the annual PER the following information concerning the operations of the cartridge style filter 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 cartridge style filter was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
  - 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 cartridge style filter;
  - 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 PER 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 Limitations:

Particulate Emissions (PE) at the control device outlet shall not exceed 0.030 grain per dry standard cubic foot of exhaust gases or there shall be no visible PE from the exhaust stack, whichever is less stringent.

Applicable Compliance Methods:

If required, compliance with the 0.030 grain of PE per dry standard cubic foot of exhaust gases from the stack shall be determined in accordance with U.S. EPA Methods 1 through 5, as appropriate. If required, compliance with the requirement for no visible PE from the exhaust stack shall be determined in accordance with U.S. EPA Method 22.

The short term emission limitations are equivalent to the Applicable Emission Limitations/Control Measures required under OAC rule 3745-17-08(B)(3) for this type of source. Since the facility is located in a non-Appendix A area, the equivalent emission limitations are established through BAT.
  - b. Emission Limitations:

Uncontrolled fugitive PE shall not exceed 0.68 pound per hour.

Emissions of particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.39 pound per hour from the exhaust stack and uncontrolled fugitive emissions, combined.



Emissions of particulate matter 2.5 microns and less in diameter (PM<sub>2.5</sub>) shall not exceed 0.04 pound per hour from the exhaust stack and uncontrolled fugitive emissions, combined.

Applicable Compliance Method:

AP-42 EFs are corrected based on data from Reference 3 indicating that abrasive blasting using grit are about 24 percent of total PE/PM<sub>10</sub>/PM<sub>2.5</sub> from abrasive blasting using sand.

If required, compliance with the short term PE emission limitation shall be demonstrated by multiplying the actual amount of abrasives sprayed, in pounds per hour, by the EF, in pounds of PE per 1000 pounds of abrasives sprayed, multiplied by the correction factor of 0.24, multiplied by the Capture Efficiency (CaE) for abrasive blasting emissions not captured,  $(1 - \text{CaE}\%/100)$ , yielding pounds of PE per hour fugitive, uncontrolled, from abrasive blasting.

If required, compliance with the short term PM<sub>10</sub> emission limitation shall be demonstrated by multiplying the actual amount of abrasives sprayed, in pounds per hour, by the EF, in pounds of PM<sub>10</sub> per 1000 pounds of abrasives sprayed, multiplied by the correction factor of 0.24, multiplied by the Capture Efficiency (CaE) of the blast building  $(\text{CaE}\%/100)$ , multiplied by the Control Efficiency (CE) of the cartridge-style filter  $(1 - \text{CE}\%/100)$  yielding pounds of PM<sub>10</sub> per hour, controlled, from abrasive blasting. The permittee shall also multiply the actual amount of abrasives sprayed, in pounds per hour, by the EF, in pounds of PM<sub>10</sub> per 1000 pounds of abrasives sprayed, multiplied by the correction factor of 0.24, multiplied by the Capture Efficiency (CaE) for abrasive blasting emissions not captured,  $(1 - \text{CaE}\%/100)$ , yielding pounds of PM<sub>10</sub> per hour fugitive, uncontrolled, from abrasive blasting. The permittee shall then sum the hourly rates for a total in pounds of PM<sub>10</sub> per hour.

Compliance with the short term PM<sub>2.5</sub> emission limitation shall be demonstrated by a method similar to demonstrating compliance with the PM<sub>10</sub> limitation replacing the PM<sub>10</sub> EF with the appropriate PM<sub>2.5</sub> EF.

The short term emission limitations were established based on information provided in Application A0048251 for PTIO P0115086:

27 pounds PE/1000 pounds abrasive, sand x 0.24 = 6.48 pounds PE/1000 pounds abrasive, grit

2104 pounds abrasive, grit/hour x 6.48 pounds PE/1000 pounds abrasive, grit = 13.63 pounds PE/hour

13.63 pounds PE/hour x  $(1 - 0.95 \text{ CaE})$  = 0.68 pound PE/hour, uncontrolled fugitive

13 pounds PM<sub>10</sub>/1000 pounds abrasive, sand x 0.24 = 3.12 pounds PM<sub>10</sub>/1000 pounds abrasive, grit



2104 pounds abrasive, grit/hour x 3.12 pounds PM10/1000 pounds abrasive, grit  
= 6.56 pounds PM10/hour

6.56 pounds PM10/hour x (0.95 CaE) x (1 – 0.99 CE) = 0.06 pound PM10/hour,  
controlled

6.56 pounds PM10/hour x (1 – 0.95 CaE) = 0.33 pound PM10/hour, uncontrolled  
fugitive

0.06 pound PM10/hour + 0.33 pound PM10/hour = 0.39 pound PM10/hour, total

1.3 pound PM2.5/1000 pounds abrasive, sand x 0.24 = 0.312 pound PM2.5/1000  
pounds abrasive, grit

2104 pounds abrasive, grit/hour x 0.312 pound PM2.5/1000 pounds abrasive, grit  
= 0.66 pound PM2.5/hour

0.66 pound PM2.5/hour x (0.95 CaE) x (1 – 0.99 CE) = 0.006 pound PM2.5/hour,  
controlled

0.66 pound PM2.5/hour x (1 – 0.95 CaE) = 0.033 pound PM2.5/hour,  
uncontrolled fugitive

0.006 pound PM2.5/hour + 0.033 pound PM2.5/hour = 0.039 pound PM2.5/hour,  
rounded to 0.04 pound PM2.5

c. Emission Limitations and Voluntary Restrictions:

PE shall not exceed 3.55 tons per year (TPY).

Emissions of particulate matter 10 microns and less in diameter (PM10) shall not  
exceed 1.71 TPY.

Emissions of particulate matter 2.5 microns and less in diameter (PM2.5) shall  
not exceed 0.18 TPY.

Applicable Compliance Method:

The permittee shall demonstrate compliance by calculations using the Emission  
Factors (EF) from AP-42, Fifth Ed., Chpt. 13.2.6., Abrasive Blasting, 9/1997,  
Table 13.2.6-1, corrected.

Compliance with the annual PE limitation shall be demonstrated by multiplying  
the actual amount of abrasives sprayed, in pounds per hour, by the EF, in  
pounds of PE per 1000 pounds of abrasives sprayed, multiplied by the correction  
factor of 0.24, multiplied by the actual operating time, in hours per year,  
multiplied by the Capture Efficiency (CaE) of the blast building (CaE%/100),  
multiplied by the Control Efficiency (CE) of the cartridge-style filter (1 –  
CE%/100), yielding pounds of PE per year, controlled, from abrasive blasting.



The permittee shall also multiply the actual amount of abrasives sprayed, in pounds per hour, by the EF, in pounds of PE per 1000 pounds of abrasives sprayed, multiplied by the correction factor of 0.24, multiplied by the actual operating time, in hours per year, multiplied by the Capture Efficiency (CaE) for abrasive blasting emissions not captured,  $(1 - \text{CaE}\%/100)$ , yielding pounds of PE per year fugitive, uncontrolled, from abrasive blasting. The permittee shall then sum the annual rates and divide by 2000 for a total in TPY PE. If the permittee sprays abrasives at different rates, calculations should be made for each particular spray rate, if necessary.

Compliance with the annual PM10 and PM2.5 emission limitations shall be demonstrated by a method similar to demonstrating compliance with the PE limitations replacing the PE EFs with the appropriate PM10 and PM2.5 EFs.

AP-42 EFs are corrected based on data from Reference 3 indicating that abrasive blasting using grit are about 24 percent of total PE/PM10/PM2.5 from abrasive blasting using sand.

The annual emission limitations were established based on information provided in Application A0048251 for PTIO P0115086:

27 pounds PE/1000 pounds abrasive, sand  $\times 0.24 = 6.48$  pounds PE/1000 pounds abrasive, grit

13 pounds PM10/1000 pounds abrasive, sand  $\times 0.24 = 3.12$  pounds PM10/1000 pounds abrasive, grit

1.3 pound PM2.5/1000 pounds abrasive, sand  $\times 0.24 = 0.312$  pound PM2.5/1000 pounds abrasive, grit

2104 pounds abrasive, grit/hour  $\times 6.48$  pounds PE/1000 pounds abrasive, grit = 13.63 pounds PE/hour

2104 pounds abrasive, grit/hour  $\times 3.12$  pounds PM10/1000 pounds abrasive, grit = 6.56 pounds PM10/hour

2104 pounds abrasive, grit/hour  $\times 0.312$  pound PM2.5/1000 pounds abrasive, grit = 0.66 pound PM2.5/hour

13.63 pounds PE/hour  $\times (0.95 \text{ CaE}) \times (1 - 0.99 \text{ CE}) = 0.13$  pound PE/hour, controlled

13.63 pounds PE/hour  $\times (1 - 0.95 \text{ CaE}) = 0.68$  pound PE/hour, uncontrolled fugitive

0.13 pound PE/hour, controlled  $\times 8760$  hours/year  $\times 1$  Ton/2000 pounds = 0.57 TPY PE, controlled

0.68 pound PE/hour, uncontrolled fugitive  $\times 8760$  hours/year  $\times 1$  Ton/2000 pounds = 2.98 TPY PE, uncontrolled fugitive



6.56 pounds PM10/hour x (0.95 CaE) x (1 – 0.99 CE) = 0.06 pound PM10/hour, controlled

6.56 pounds PM10/hour x (1 – 0.95 CaE) = 0.33 pound PM10/hour, uncontrolled fugitive

0.06 pound PM10/hour, controlled x 8760 hours/year x 1 Ton/2000 pounds = 0.26 TPY PM10, controlled

0.33 pound PM10/hour, uncontrolled fugitive x 8760 hours/year x 1 Ton/2000 pounds = 1.45 TPY PM10, uncontrolled fugitive

0.66 pound PM2.5/hour x (0.95 CaE) x (1 – 0.99 CE) = 0.006 pound PM2.5/hour, controlled

0.66 pound PM2.5/hour x (1 – 0.95 CaE) = 0.033 pound PM2.5/hour, uncontrolled fugitive

0.006 pound PM2.5/hour, controlled x 8760 hours/year x 1 Ton/2000 pounds = 0.03 TPY PM2.5

0.033 pound PM2.5/hour, uncontrolled fugitive x 8760 hours/year x 1 Ton/2000 pounds = 0.15 TPY PM2.5

0.57 TPY PE + 2.98 TPY PE = 3.55 TPY PE

0.26 TPY PM10 + 1.45 TPY PM10 = 1.71 TPY PM10

0.03 TPY PM2.5 + 0.15 TPY PM2.5 = 0.18 TPY PM2.5

d. Emission Limitations:

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

Visible emissions of fugitive dust from this emissions unit shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

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

g) Miscellaneous Requirements

(1) None.