



7/3/2014

Robert Orr
GE Lighting - Ivanhoe Road
1099 Ivanhoe Road
Cleveland, OH 44110

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

Facility ID: 1318000156
Permit Number: P0115502
Permit Type: Renewal
County: Cuyahoga

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:

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

Andrew Hall Permit Review/Development Section Ohio EPA, DAPC 50 West Town Street Suite 700 PO Box 1049 Columbus, Ohio 43216-1049	and	Cleveland Division of Air Quality 2nd Floor 75 Erieview Plaza Cleveland, OH 44114
---	-----	--

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297.

Sincerely,

Michael W. Ahern
Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 Via E-Mail Notification
CDAQ; Pennsylvania; Canada



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination (not applicable)

Netting Determination (not applicable)

2. Source Description:

PTIO renewal permit for GE Lighting which manufactures powder coatings for light bulbs. The following emissions units are included in this renewal permit: P011 natural gas fired calcium carbonate dryer with two baghouse product collectors; P013 electric pusher furnace and tray loading/unloading with baghouse; P041 inorganic chemical powder grinding, sieving, washing and drying with wet scrubber; P046 calcium fluoride spray dry process with baghouse; and P034, P035, P056 electric pusher furnaces and material handling with baghouse and scrubber.

3. Facility Emissions and Attainment Status:

GE Lighting reported actual emissions of less than 10 tons/year for each criteria pollutant for the most recent calendar years. Operations at this facility have been limited and many emissions units have been permanently shut down. Cuyahoga County is currently designated as nonattainment for PM_{2.5}, ozone, and partial nonattainment for lead.

4. Source Emissions:

GE Lighting uses baghouses and scrubbers to control particulate emissions from their operations. All of the emissions units in this renewal permit except for P011 had PTIs issued with BAT limits established at the controlled potential to emit. For P011, the allowable limit from OAC rule 3745-17-11 is 2.2 lbs PE/hr. The total controlled potential to emit for particulate emissions for the emissions units in the permit is 17.2 tons/year. The potential to emit for VOC is 5.96 tons/year.

5. Conclusion:

Because the total facility-wide controlled potential to emit for both particulates and VOC are less than the Title V major source threshold of 100 tons/year, GE Lighting is not subject to the Title V requirements.

6. Please provide additional notes or comments as necessary:

GE Lighting requested Draft issuance of their PTIO renewal permit in order to ensure federal enforceability of their control equipment.



Permit Strategy Write-Up
GE Lighting - Ivanhoe Road
Permit Number: P0115502
Facility ID: 1318000156

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	17.2
VOC	5.96

PUBLIC NOTICE

7/3/2014 Issuance of Draft Air Pollution Permit-To-Install and Operate

GE Lighting - Ivanhoe Road

1099 Ivanhoe Road,
Cleveland, OH 44110

Cuyahoga County

FACILITY DESC.: Inorganic Dye and Pigment Manufacturing

PERMIT #: P0115502

PERMIT TYPE: Renewal

PERMIT DESC: PTIO renewal permit for manufacturer of powder coatings for light bulbs including emissions units P011 (natural gas-fired calcium carbonate dryer with two baghouse product collectors); P013 (electric pusher furnace and tray loading/unloading with baghouse); P041 (inorganic chemical powder grinding, sieving, washing and drying with wet scrubber); P046 (calcium fluoride spray dry process with baghouse); and P034, P035 and P056 (electric pusher furnaces and material handling with baghouse and scrubber).

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Mary McGearry, Cleveland Division of Air Quality, 2nd Floor 75 Erieview Plaza, Cleveland, OH 44114. Ph: (216)664-2297



DRAFT

**Division of Air Pollution Control
Permit-to-Install and Operate
for
GE Lighting - Ivanhoe Road**

Facility ID:	1318000156
Permit Number:	P0115502
Permit Type:	Renewal
Issued:	7/3/2014
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install and Operate
for
GE Lighting - Ivanhoe Road

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. P011, CaCO3 Dryer #0726	11
2. P013, AEF Furnace F-78, Part of Second Fire Operation	14
3. P041, LAP Green Phosphor Manufacturing Process.....	18
4. P046, Calcium Fluoride Spray Dryer	24
5. Emissions Unit Group -Second Fire: P034,P035,P056,.....	28



Draft Permit-to-Install and Operate

GE Lighting - Ivanhoe Road

Permit Number: P0115502

Facility ID: 1318000156

Effective Date: To be entered upon final issuance

Authorization

Facility ID: 1318000156
Application Number(s): A0047774, A0048819, A0048820, A0048821, A0048822, A0050941
Permit Number: P0115502
Permit Description: PTIO renewal permit for manufacturer of powder coatings for light bulbs including emissions units P011 (natural gas-fired calcium carbonate dryer with two baghouse product collectors); P013 (electric pusher furnace and tray loading/unloading with baghouse); P041 (inorganic chemical powder grinding, sieving, washing and drying with wet scrubber); P046 (calcium fluoride spray dry process with baghouse); and P034, P035 and P056 (electric pusher furnaces and material handling with baghouse and scrubber).
Permit Type: Renewal
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 7/3/2014
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

GE Lighting - Ivanhoe Road
1099 Ivanhoe Road
Cleveland, OH 44110

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 Erieview 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

Craig W. Butler
Director



Authorization (continued)

Permit Number: P0115502

Permit Description: PTIO renewal permit for manufacturer of powder coatings for light bulbs including emissions units P011 (natural gas-fired calcium carbonate dryer with two baghouse product collectors); P013 (electric pusher furnace and tray loading/unloading with baghouse); P041 (inorganic chemical powder grinding, sieving, washing and drying with wet scrubber); P046 (calcium fluoride spray dry process with baghouse); and P034, P035 and P056 (electric pusher furnaces and material handling with baghouse and scrubber).

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

Emissions Unit ID:	P011
Company Equipment ID:	CaCO3 Dryer #0726
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P013
Company Equipment ID:	AEF Furnace F-78
Superseded Permit Number:	13-3453
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P041
Company Equipment ID:	Green process
Superseded Permit Number:	13-2599
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P046
Company Equipment ID:	Calcium Fluoride Spray Dryer
Superseded Permit Number:	13-2906
General Permit Category and Type:	Not Applicable

Group Name: Second Fire

Emissions Unit ID:	P034
Company Equipment ID:	Electric pusher furnace No. F-87
Superseded Permit Number:	13-3326
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P035
Company Equipment ID:	AEF FURNACE #F-1001
Superseded Permit Number:	13-3326
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P056
Company Equipment ID:	P056
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Draft Permit-to-Install and Operate
GE Lighting - Ivanhoe Road
Permit Number: P0115502
Facility ID: 1318000156
Effective Date: To be entered upon final issuance

A. Standard Terms and Conditions



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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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



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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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



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

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the 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 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.



Draft Permit-to-Install and Operate

GE Lighting - Ivanhoe Road

Permit Number: P0115502

Facility ID: 1318000156

Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



Draft Permit-to-Install and Operate

GE Lighting - Ivanhoe Road

Permit Number: P0115502

Facility ID: 1318000156

Effective Date: To be entered upon final issuance

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.



Draft Permit-to-Install and Operate

GE Lighting - Ivanhoe Road

Permit Number: P0115502

Facility ID: 1318000156

Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. P011, CaCO3 Dryer #0726

Operations, Property and/or Equipment Description:

Natural gas fired calcium carbonate dryer with two product collectors vented outdoors.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) from the baghouse shall not exceed 20% opacity as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 2.2 lbs/hr.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the baghouse for the purpose of product collection 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 4 to 8 inches of water, while the emissions unit is in operation.
- (2) 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 weekly basis to ensure compliance with the above-mentioned applicable requirements.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland Division of Air Quality (Cleveland DAQ).
- (2) 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.
- (3) The permittee shall identify in the annual permit evaluation report any time recorded in d)(2) when the pressure drop across the baghouse was out of 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:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with Method 9 in 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission limitation:
2.2 lb/hr PE

Applicable Compliance Method:
If required, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A to demonstrate compliance with the allowable mass emission rates.



Draft Permit-to-Install and Operate

GE Lighting - Ivanhoe Road

Permit Number: P0115502

Facility ID: 1318000156

Effective Date: To be entered upon final issuance

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1972.



2. P013, AEF Furnace F-78, Part of Second Fire Operation

Operations, Property and/or Equipment Description:

Electric pusher furnace #F-78 vented directly outdoors and tray loading/unloading with baghouse vented indoors.

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 13-3453 issued 11/4/98	Particulate emissions (PE) shall not exceed 0.015 lb/hr and 0.066 tpy. Visible PE from the furnace stack shall not exceed 5% opacity as a six-minute average. See b)(2)a. and b)(2)b. below.
b.	OAC rule 3745-17-07(A)(1)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limit for the furnace stack established pursuant to OAC rule 3745-31-05(A)(3).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		The visible particulate emission limitation specified by this rule does not apply to the baghouse stack because it is vented indoors.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
d.	OAC rule 3745-17-08(B)	See b)(2)a. below.
e.	OAC rule 3745-17-11(B)(1)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM shall include localized exhaust ventilation to the baghouse. The collection efficiency 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.
- b. The emissions from this emissions unit shall be vented to the baghouse at all times whenever the emissions unit is in operation.

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 particulate emissions from the furnace stack and for any visible emissions of fugitive dust from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and



- c. any corrective actions taken to eliminate the visible emissions.
 - (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 4.0 to 8.0 inches of water, while the emissions unit is in operation.
 - (3) 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 weekly basis to ensure compliance with the above-mentioned applicable requirements.
- e) Reporting Requirements
- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland Division of Air Quality (Cleveland DAQ).
 - (2) 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.
 - (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(1) above:
 - a. all days from the weekly inspections during which any visible particulate emissions were observed from the furnace stack serving this emissions unit;
 - b. all days from the weekly inspections during which any visible emission of fugitive dust were observed from the non-stack egress points (e.g., window, doors, roof monitors) serving this emissions unit; and
 - c. any corrective actions taken to eliminate the visible particulate emissions from the furnace stack and/or visible emissions of fugitive dust.
 - (4) The permittee shall identify in the annual permit evaluation report any time recorded in d)(3) when the pressure drop across the baghouse was out of 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. Emissions Limitation:
0.015 lb PE/hr

Applicable Compliance Method:

If requested, the permittee shall demonstrate compliance by emission testing in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

- b. Emissions Limitation:
0.066 tpy PE

Applicable Compliance Method:

The TPY limitation was developed by multiplying the lbs/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emissions Limitation:

Visible particulate emissions from the furnace stack shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- d. Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation are the non-stack egress points serving this emissions unit (e.g., windows, doors, roof monitors).

- g) Miscellaneous Requirements

- (1) None.



3. P041, LAP Green Phosphor Manufacturing Process

Operations, Property and/or Equipment Description:

Inorganic chemical powder grinding, sieving, washing and drying "green process" controlled with a wet scrubber vented outdoors.

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) Administrative Modification to PTI 13-2599 issued 1/13/1993 to revise limits based on updated PTE calculations.	Particulate emissions (PE) shall not exceed 0.7 lb/hr and 3.07 tons per year (tpy). VOC emissions shall not exceed 1.36 lb/hr and 5.96 tpy.
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the scrubber stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
d.	OAC rule 3745-17-08(B)	See b)(2)a. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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 shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM shall include localized exhaust ventilation over the emissions unit vented to the scrubber. The collection efficiency 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.
- b. The emissions from this emissions unit shall be vented to the wet scrubber at all times when the emissions unit is in operation.
- c. The requirements of OAC rule 3745-21-07(M) do not apply because there is no control device for VOC emissions and the materials are not baked or heat cured.
- d. The VOC emission limits represent the maximum potential to emit; therefore, monitoring, record keeping, and reporting requirements are not needed for these limits.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly checks for visible emissions of fugitive dust from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to



demonstrate compliance, shall not be less than 50 gallons per minute, while the emissions unit is in operation.

- (3) The permittee shall properly operate and maintain equipment to continuously monitor the scrubber liquid flow rate (in gallons per minute), during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber flow rate on a weekly basis. The monitoring equipment shall be 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 flow rate 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 liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality. The permittee may request revisions to the permitted range or limit for the liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate for this emissions unit. 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) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland Division of Air Quality (Cleveland DAQ).
- (2) 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.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(1) above:
 - a. all days from the weekly inspections during which any visible emission of fugitive dust were observed from the non-stack egress points (e.g., window, doors, roof monitors) serving this emissions unit; and
 - b. any corrective actions taken to eliminate the visible emissions of fugitive dust.
- (4) 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 these emissions units:
 - a. each period of time (start time and date, and end time and date) when the scrubber was in operation and the liquid flow rate 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 was 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. (above) where prompt corrective action, that would bring the liquid flow rate 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. (above) 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 b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:
0.7 lb PE/hr

Applicable Compliance Method:

If requested, the permittee shall demonstrate compliance by emission testing in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

- b. Emissions Limitation:
3.07 tpy PE

Applicable Compliance Method:

The TPY limitation was developed by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emissions Limitation:
1.36 lb VOC/hr

Applicable Compliance Method:

If requested, the permittee shall demonstrate compliance by emission testing in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25 or 25A.

- d. Emissions Limitation:
5.96 tpy VOC

Applicable Compliance Method:

The TPY limitation was developed by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation

- e. Emissions Limitation:

Visible particulate emissions from the wet scrubber stack shall not exceed 20% opacity, as a six-minute average.



Draft Permit-to-Install and Operate

GE Lighting - Ivanhoe Road

Permit Number: P0115502

Facility ID: 1318000156

Effective Date: To be entered upon final issuance

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Methods 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

f. Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation are the non-stack egress points serving this emissions unit (e.g., windows, doors, roof monitors).

g) Miscellaneous Requirements

(1) None.



4. P046, Calcium Fluoride Spray Dryer

Operations, Property and/or Equipment Description:

Calcium fluoride spray dry process with baghouse vented outdoors

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 13-2906 issued 4/19/1995	Particulate emissions (PE) shall not exceed 0.98 lb/hr and 4.29 tpy. Visible particulate emissions from the baghouse stack shall not exceed 5% opacity as a six-minute average. Visible emissions of fugitive dust shall not exceed 5% opacity as a six-minute average.
b.	OAC rule 3745-17-07(A)(1)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(B)(1)	The visible fugitive emission limitation specified by this rule is less stringent than the visible fugitive emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-08(B)	See b)(2)a. below.
e.	OAC rule 3745-17-11(B)(1)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM shall include handling wetted material, enclosed conveyances for dry material, and use of localized exhaust ventilation to the baghouse. The collection efficiency 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.
- b. The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly checks for visible emissions of fugitive dust from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.



- (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 4 to 8 inches of water, while the emissions unit is in operation.
- (3) 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 weekly basis to ensure compliance with the above-mentioned applicable requirements

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland Division of Air Quality (Cleveland DAQ).
- (2) 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.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(1) above:
 - a. all days from the weekly inspections during which any visible emission of fugitive dust were observed from the non-stack egress points (e.g., window, doors, roof monitors) serving this emissions unit; and
 - b. any corrective actions taken to eliminate the visible emissions of fugitive dust.
- (4) The permittee shall identify in the annual permit evaluation report any time recorded in d)(3) when the pressure drop across the baghouse was out of 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:
0.98 lb PE/hr

Applicable Compliance Method:
If required, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with Methods 1 through 5 of 40 CFR part 60, Appendix A.



- b. Emission Limitation:
4.29 tpy PE combined

Applicable Compliance Method:

Compliance with the yearly PE emission limitation shall be determined by multiplying the hourly emission rate f)(1)a. by 8,760 hours per year and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

- c. Emission Limitation:
Visible emissions of fugitive dust shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 9 in 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation are the non-stack egress points serving this emissions unit (e.g., windows, doors, roof monitors).

- g) Miscellaneous Requirements

- (1) None.



5. Emissions Unit Group -Second Fire: P034,P035,P056,

EU ID	Operations, Property and/or Equipment Description
P034	Electric pusher furnace # F-87 and material handling with baghouse (vented indoors) and scrubber (vented outdoors)
P035	Electric pusher furnace #F-1001 and material handling with baghouse (vented indoors) and scrubber (vented outdoors)
P056	Electric pusher furnace #F-90 and material handling with baghouse (vented indoors) and scrubber (vented outdoors)

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 for each Emissions Unit
a.	OAC rule 3745-31-05(A)(3) P056 PTI 13-2599 issued 1/13/1993 (formerly part of P041 process); P034-P035 PTI 13-3326 11/4/1998	Particulate emissions (PE) shall not exceed 0.015 lb/hr and 0.066 tpy Visible PE from the scrubber stack shall not exceed 5% opacity as a six-minute average. Ammonia shall not exceed 0.05 lb/hr and 0.22 tpy. Ammonia limit does not apply to P013. See b)(2)a. and b)(2)b. below.



Draft Permit-to-Install and Operate

GE Lighting - Ivanhoe Road

Permit Number: P0115502

Facility ID: 1318000156

Effective Date: To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures for each Emissions Unit
b.	OAC rule 3745-17-07(A)(1)	The visible particulate emission limit specified by this rule is less stringent than the visible particulate emission limit for the scrubber established pursuant to OAC rule 3745-31-05(A)(3). The visible particulate emission limitation specified by this rule does not apply to the baghouse stack because it is vented indoors.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
d.	OAC rule 3745-17-08(B)	See b)(2)a. below.
e.	OAC rule 3745-17-11(B)(1)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM shall include localized exhaust ventilation to the baghouse and scrubber. The collection efficiency 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.
- b. The emissions from this emissions unit shall be vented to the baghouse at all times when the emissions unit is in operation.
- c. The emissions from the emissions units shall be vented to the wet scrubber when one or more of the emissions units are in operation and processing a product that generates ammonia emissions.

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 non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
- (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 4 to 8 inches of water, while the emissions unit is in operation.
- (3) 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 weekly basis to ensure compliance with the above-mentioned applicable requirements.
- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 400 liters per minute, while the emissions unit is in operation.
- (5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the pH of the scrubber liquid shall be no higher than 7.0 or no higher than the highest value of pH maintained during the most recent stack test.
- (6) The permittee shall properly operate and maintain equipment to continuously monitor the scrubber liquid flow rate (in liters per minute), and 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 and flow rate on a weekly basis. The monitoring equipment shall be 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 flow rate, and 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 liquid flow rate and pH are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality. The permittee may request revisions to the permitted range or limit for the liquid flow rate or pH based upon information obtained during future performance tests that demonstrate compliance with the allowable ammonia 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) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland Division of Air Quality (Cleveland DAQ).



- (2) 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.
 - (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(1) above:
 - a. all days from the weekly inspections during which any visible emission of fugitive dust were observed from the non-stack egress points (e.g., window, doors, roof monitors) serving this emissions unit; and
 - b. any corrective actions taken to eliminate the visible emissions of fugitive dust.
 - (4) The permittee shall identify in the annual permit evaluation report any time recorded in d)(3) when the pressure drop across the baghouse was out of range.
 - (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 these emissions units:
 - a. each period of time (start time and date, and end time and date) when the scrubber was in operation and the liquid flow rate or 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 running a product that emits ammonia 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. (above) where prompt corrective action, that would bring the liquid flow rate, and/or 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. (above) 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 b) of these terms and conditions shall be determined in accordance with the following methods:



- a. Emissions Limitation:
0.015 lb PE/hr

Applicable Compliance Method:

If requested, the permittee shall demonstrate compliance by emission testing in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

- b. Emissions Limitation:
0.066 tpy PE

Applicable Compliance Method:

The TPY limitation was developed by multiplying the lbs/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emissions Limitation:

Visible particulate emissions from the scrubber stack shall not exceed five percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- d. Emission limitation:
0.05 lb/hr ammonia

Applicable Compliance Method:

Compliance with the hourly ammonia emission limitation shall be determined by the following formula:

$$E = \frac{17 \text{ lbs}}{\text{mole NH}_3} * \frac{\text{mole}}{359 \text{ ft}^3} * \frac{1.7 \text{ ft}^3}{\text{min}} * \frac{60 \text{ min}}{\text{hour}} * (1 - \text{CE}) = 0.05 \text{ lb/hr NH}_3$$

Where CE = 99%

- Emissions Limitation:
0.22 TPY ammonia

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the short-term allowable ammonia emission limitation in f)(1)d. by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.



e. Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation are the non-stack egress points serving this emissions unit (e.g., windows, doors, roof monitors)

g) Miscellaneous Requirements

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