



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

2/19/2016

JAMES MASKIL  
Momentive Performance Materials Quartz Inc.  
22557 WEST LUNN RD  
STRONGSVILLE, OH 44149

Certified Mail

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1318558216  
Permit Number: P0117596  
Permit Type: Renewal  
County: Cuyahoga

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**
- **What should you do if you notice a spill or environmental emergency?**

**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/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

## **What should you do if you notice a spill or environmental emergency?**

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: CDAQ



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Momentive Performance Materials Quartz Inc.**

Facility ID:	1318558216
Permit Number:	P0117596
Permit Type:	Renewal
Issued:	2/19/2016
Effective:	2/19/2016
Expiration:	9/11/2018





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
Momentive Performance Materials Quartz Inc.

**Table of Contents**

Authorization .....	1
A. Standard Terms and Conditions .....	6
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	7
2. Who is responsible for complying with this permit? .....	7
3. What records must I keep under this permit? .....	7
4. What are my permit fees and when do I pay them?.....	7
5. When does my PTIO expire, and when do I need to submit my renewal application? .....	7
6. What happens to this permit if my project is delayed or I do not install or modify my source? .....	8
7. What reports must I submit under this permit? .....	8
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? .....	8
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	8
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? .....	9
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? .....	9
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? .....	9
13. Can I transfer this permit to a new owner or operator?.....	10
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? .....	10
15. What happens if a portion of this permit is determined to be invalid? .....	10
B. Facility-Wide Terms and Conditions.....	11
C. Emissions Unit Terms and Conditions .....	13
1. P001, Calciner 18-1 .....	14
2. P004, Heat Treaters 1-7.....	26
3. P005, Litzler #2.....	35
4. P006, Thermovation Dryer for 18-1 .....	43
5. P007, Litzler Dryer .....	51
6. P008, Blend Transfer System .....	59
7. P009, Spencer Coke Recover.....	64
8. P010, IMC Dust Collector.....	69
9. P011, Heater/Finsh Cut Off.....	74



10. P013, Crush Mill & Screen .....	79
11. P016, Furnace 17 .....	84
12. P017, Titanium DiBoride 680 KW electric furnace with baghouse .....	90
13. P018, Calciner 18-2 .....	95
14. P033, PBN Furnace Unit No. 5 A/B.....	103
15. P038, Vortec Mill #2.....	112
16. P044, Calciner 18-3 .....	118
17. Emissions Unit Group -Powder Firing Lines A through F: P014, P039, P040, P041, P042, P043.....	129
18. Emissions Unit Group -Powder Firing Lines G through R: P019, P020, P021, P022, P023, P024, P025, P026, P027, P028, P029, P030 .....	135
19. Emissions Unit Group -Powder Firing Lines S through V: P045, P046, P047, P048.....	142



## Authorization

Facility ID: 1318558216  
Application Number(s): A0048778  
Permit Number: P0117596  
Permit Description: FEPTIO renewal permit for calciners (P001, P018, P044), heat treater furnace (P004), dryers (P005, P006, P007), blend/load station (P008), coke recovery (P009), machining (P010, P011), mill/screen (P013), furnaces (P016, P017, P033), vortec mill (P038), powder firing lines (P014, P019 - P030, and P039 - P043). Emissions units are controlled with a baghouse and/or scrubber.  
Permit Type: Renewal  
Permit Fee: \$0.00  
Issue Date: 2/19/2016  
Effective Date: 2/19/2016  
Expiration Date: 9/11/2018  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Momentive Performance Materials Quartz Inc.  
22557 WEST LUNN ROAD  
Strongsville, OH 44149

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

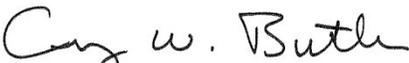
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



## Authorization (continued)

Permit Number: P0117596

Permit Description: FEPTIO renewal permit for calciners (P001, P018, P044), heat treater furnace (P004), dryers (P005, P006, P007), blend/load station (P008), coke recovery (P009), machining (P010, P011), mill/screen (P013), furnaces (P016, P017, P033), vortec mill (P038), powder firing lines (P014, P019 - P030, and P039 - P043). Emissions units are controlled with a baghouse and/or scrubber.

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:	Calciner 18-1
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P004</b>
Company Equipment ID:	Heat Treaters 1-6
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P005</b>
Company Equipment ID:	Litzler #2
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P006</b>
Company Equipment ID:	Thermovation Dryer for 18-1
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P007</b>
Company Equipment ID:	Litzler Dryer
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P008</b>
Company Equipment ID:	Blend Trans. System
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P009</b>
Company Equipment ID:	Spencer Coke Recover
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P010</b>
Company Equipment ID:	IMC Machining
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P011</b>
Company Equipment ID:	PBN Heater/Finishing Cut Off
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable



<b>Emissions Unit ID:</b>	<b>P013</b>
Company Equipment ID:	Crush Mill & Screen
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P014</b>
Company Equipment ID:	Powder Firing Line A
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P016</b>
Company Equipment ID:	Furnace 17
Superseded Permit Number:	13-03910
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P017</b>
Company Equipment ID:	Titanium DiBoride 680 KW electric furnace with baghouse
Superseded Permit Number:	13-04172
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P018</b>
Company Equipment ID:	Calciner 18-2
Superseded Permit Number:	13-04350
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P019</b>
Company Equipment ID:	Powder Firing Line G
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P020</b>
Company Equipment ID:	Powder Firing Line H
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P021</b>
Company Equipment ID:	Powder Firing Line I
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P022</b>
Company Equipment ID:	Powder Firing Line J
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P023</b>
Company Equipment ID:	Powder Firing Line K
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P024</b>
Company Equipment ID:	Powder Firing Line L
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P025</b>
Company Equipment ID:	Powder Firing Line M
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable



<b>Emissions Unit ID:</b>	<b>P026</b>
Company Equipment ID:	Powder Firing Line N
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P027</b>
Company Equipment ID:	Powder Firing Line O
Superseded Permit Number:	13-04549
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P028</b>
Company Equipment ID:	Powder Firing Line P
Superseded Permit Number:	13-04572
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P029</b>
Company Equipment ID:	Powder Firing Line Q
Superseded Permit Number:	13-04572
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P030</b>
Company Equipment ID:	Powder Firing Line R
Superseded Permit Number:	13-04572
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P033</b>
Company Equipment ID:	PBN Furnace Unit No. 5 A/B
Superseded Permit Number:	13-04609
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P038</b>
Company Equipment ID:	P038 Vortec Mill #2
Superseded Permit Number:	13-04689
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P039</b>
Company Equipment ID:	Powder Firing Line B
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P040</b>
Company Equipment ID:	Powder Firing Line C
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P041</b>
Company Equipment ID:	powder Firing Line D
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P042</b>
Company Equipment ID:	Powder Firing Line E
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P043</b>
Company Equipment ID:	Powder Firing Line F
Superseded Permit Number:	13-03592
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

<b>Emissions Unit ID:</b>	<b>P044</b>
Company Equipment ID:	Calciner 18-3
Superseded Permit Number:	P0108192
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P045</b>
Company Equipment ID:	POWDER FIRING LINE S
Superseded Permit Number:	P0108192
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P046</b>
Company Equipment ID:	POWDER FIRING LINE T
Superseded Permit Number:	P0108192
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P047</b>
Company Equipment ID:	POWDER FIRING LINE U
Superseded Permit Number:	P0108192
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P048</b>
Company Equipment ID:	POWDER FIRING LINE V
Superseded Permit Number:	P0108192
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

## **A. Standard Terms and Conditions**

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

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

**2. Who is responsible for complying with this permit?**

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

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

**3. What records must I keep under this permit?**

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

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

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

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

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

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

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

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

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

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

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

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

**7. What reports must I submit under this permit?**

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

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

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

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

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

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

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

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

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

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

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

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

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

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

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

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

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

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

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

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

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

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



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

## **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.
  - a) 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) B.2.
1. The compression ignition (CI) reciprocating internal combustion engine(s) (RICE), located at an area source for hazardous air pollutants (HAPs), is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ. The existing stationary CI RICE, B001 and B002, installed before 6/12/2006, shall meet the requirements of Part 63, Subpart ZZZZ no later than 5/3/2013. The complete requirements of this rule (including the Part 63 General Provisions) may be accessed via the Internet from the Electronic code of Federal Regulations (e-CFR) website <http://www.ecfr.gov/> or by contacting the Cleveland Division of Air Quality.



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

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



**1. P001, Calciner 18-1**

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

18 inch Natural Gas Fired Calciner, equipped with a Venturi Scrubber and baghouse.

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

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

a. d)(8) – d)(11), and e)(4)

(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) specific to calciner emissions. PTI 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.67 lb/hr and 2.93 tons/yr. CO emissions shall not exceed 0.52 lb/hr and 2.28 tons/yr. NOx emissions shall not exceed 2.41 lbs/hr and 10.56 tons/yr. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). See c)(1) and c)(2) below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A) specific to calciner emissions	Visible particulate emissions from the baghouse and scrubber stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B) specific to calciner emissions	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).
d.	OAC rule 3745-31-05(A)(3) specific to natural gas combustion emissions that are vented separately	CO emissions shall not exceed 0.19 lb/hr and 0.83 ton/yr. NOx emissions shall not exceed 0.22 lb/hr and 0.96 ton/yr.
e.	OAC rule 3745-17-07(A) specific to natural gas combustion emissions that are vented separately	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.
f.	OAC rule 3745-17-11(B) specific to natural gas combustion emissions that are vented separately	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). See b)(2)a. below.
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(3) below.
g.	OAC rule 3745-114-01	See d)(8) – d)(11), and e)(4) below.

(2) Additional Terms and Conditions

- a. The calculated emission rate for particulate emissions from natural gas combustion using USEPA's AP-42 Table 1.4-2 emission factor of 7.6 lbs PE/mmcf results in an emission rate of 0.017 lb PE/hr which is less stringent than the allowable limit from OAC rule 3745-17-11(B). It was not necessary to establish a BAT emission limit because the potential to emit is only 0.07 tpy PE.

c) Operational Restrictions

- (1) The permittee shall operate the baghouse for control of particulate emissions while the emissions unit is in operation.
- (2) The permittee shall operate the venturi wet scrubber for control of particulate and ammonia emissions while the emissions unit is in operation.
- (3) The emissions unit is equipped with an alert system to indicate if the control equipment (Venturi Scrubber and/or Slipstick Sly Baghouse) is not operating while the emission unit is in operation. Once the alarm is indicated, the emissions unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (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), with any modifications deemed necessary by the permittee.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than 10 pounds per square inch (gauge).
- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber water recirculation flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 35 gallons per minute.
- (5) The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water recirculation flow rate while the emissions unit is in operation. The monitoring devices and any recorders 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.
- (6) The permittee shall collect and record the following information each day:
  - a. the pressure drop across the scrubber, in inches of water, on a daily basis;
  - b. the recirculation scrubber water flow rate, in gallons per minute, on a daily basis; and
  - c. the pressure drop across the baghouse on a daily basis.

- (7) The permittee shall maintain records for any day during which the scrubber and/or baghouse was not in service when the emission unit was in operation and the corrective actions that were taken to resume operation of the control device.
- (8) The federally enforceable permit-to-install and operate (FEPTIO) application for this/these emissions unit(s), P001, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
  - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):
$$\text{TLV}/10 \times 8/X \times 5/Y = 4 \text{ TLV}/XY = \text{MAGLC}$$
  - d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

**Toxic Contaminant:** Ammonia/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 17.41 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.70 (\*for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 36.30

MAGLC (µg/m<sup>3</sup>): 414.5

The permittee, has demonstrated that emissions of the worst-case contaminant(s) modeled, from emissions unit(s) P001, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse, pressure drop across the scrubber and/or the recirculation scrubber water flow rate was/were outside of the appropriate range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse and/or scrubber.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland DAQ.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.67 lb/hr (from calciner).

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

The emissions unit is controlled by the East Venturi Scrubber and the Slipstick Baghouse. If the total emission test results from all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are less than the total allowable emission limitation from all East CPS Primary Area emissions units controlled by the East Venturi Scrubber and/or Slipstick Baghouse, the emissions unit shall be deemed in compliance with the pound per hour limitation, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

See f)(2) below.

c. Emission Limitation:

Particulate emissions shall not exceed 2.93 tons/yr (from calciner).

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

d. Emission Limitation:

CO emissions shall not exceed 0.52 lb/hr (from calciner).

Applicable Compliance Method:

The hourly emission limitation was established by using results of an engineering stack test performed on P001 on October 4, 2006.

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10 or 10b as applicable. The results of the emissions test shall be reported in terms of pounds per hour.

e. Emission Limitation:

CO emissions shall not exceed 2.28 tons/yr (from calciner).

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

f. Emission Limitation:

NOx emissions shall not exceed 2.41 lbs/hour (from calciner).

Applicable Compliance Method:

The hourly emission limitation was established by using results of an engineering stack test performed on October 4, 2006

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7E. The results of the emissions test shall be reported in terms of pounds per hour.

The emissions unit is controlled by the East Venturi Scrubber and the Slipstick Baghouse. If the total emission test results from all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are less than the total allowable emission limitation from all East CPS Primary Area emissions units controlled by the East Venturi Scrubber and/or



Slipstick Baghouse, the emissions unit shall be deemed in compliance with the pound per hour limitation, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

g. Emission Limitation:

NOx emissions shall not exceed 10.56 tons/yr (from calciner).

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

h. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

i. Emission Limitation:

CO emissions from the combustion of natural gas (vented to a separate stack than the process emissions) shall not exceed 0.19 lb/hr

Applicable Compliance Method:

Compliance with the hourly CO emission limitation shall be determined by multiplying the emission factor taken from the U.S. EPA reference document AP-42, 5th edition Compilation of Air Pollution Emission Factors Section 1.4, Table 1.4-1 (84 lbs CO/MMscf), by the capacity (2.25 MMBtu/hr) and dividing by 1,020 Btu/scf.

j. Emission Limitation:

CO emissions from the combustion of natural gas (vented to a separate stack than the process emissions) shall not exceed 0.83 ton/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

k. Emission Limitation:

NO<sub>x</sub> emissions from the combustion of natural gas (vented to a separate stack than the process emissions) shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

Compliance with the hourly NO<sub>x</sub> emission limitation shall be determined by multiplying the emission factor taken from the U.S. EPA reference document AP-42, 5th edition Compilation of Air Pollution Emission Factors Section 1.4, Table 1.4-1 (100 lbs NO<sub>x</sub>/MMscf), by the capacity (2.25 MMBtu/hr) and dividing by 1,020 Btu/scf.

l. Emission Limitation:

NO<sub>x</sub> emissions from the combustion of natural gas (vented to a separate stack than the process emissions) shall not exceed 0.96 ton/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

- (2) Emissions testing for particulate emissions was performed on December 19, 2001 and November 11, 2003. Therefore, no additional testing is needed at this time unless required by Ohio EPA or Cleveland DAQ.

Emissions units P001, P006, P007, and P018 (East CPS Primary Production Area includes P004 only if the emissions unit is venting to the East Venturi Scrubber) are consecutive process operations venting to two common control devices. These common control devices include the East Venturi Scrubber and Slipstick Baghouse. Since the individual particulate emissions from P001 cannot be determined due to multiple emission sources sharing common control devices, the individual allowable emissions limitation from each emissions unit (P001, P006, P007, P018, and P004 if the emissions unit is venting to the East Venturi Scrubber) operating during the emissions test shall be summed and compared with the test(s) results for the emissions units controlled by the East Venturi Scrubber and/or Slipstick Baghouse in order to determine compliance with the pound per hour limitation for P001, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick



Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

- g) Miscellaneous Requirements
  - (1) None.

**2. P004, Heat Treaters 1-7**

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

East Boron Nitride Heat Treater Furnace System (1 through 7), equipped with a Venturi Scrubber

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

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

a. d)(6) – d)(9), and e)(4)

(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 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the scrubber stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.
e.	OAC rule 3745-114-01	See d)(6) – d)(9), and e)(4) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate a venturi wet scrubber for control of particulate and ammonia emissions while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment 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 pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than 10 pounds per square inch (gauge).
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber water recirculation flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 35 gallons per minute.
- (3) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water recirculation flow rate while the emissions unit is in operation. The monitoring devices and any recorders 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.
- (4) The permittee shall collect and record the following information each day:
  - a. the pressure drop across the scrubber, in inches of water, on a daily basis; and

- b. the scrubber water recirculation flow rate, in gallons per minute, on a daily basis.
- (5) The permittee shall maintain records for any day during which the scrubber was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.
- (6) The federally enforceable permit-to-install and operate (FEPTIO) application for this/these emissions unit(s), P004, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

**Toxic Contaminant:** Ammonia/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 17.41 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.79 (\*for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 40.95

MAGLC (µg/m<sup>3</sup>): 414.5

The permittee, has demonstrated that emissions of the worst-case contaminant(s) modeled, from emissions unit(s) P004, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (7) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the “Toxic Air Contaminant Statute” will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a “modification” under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level

concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or scrubber water recirculation flow rate was outside of the appropriate range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

The emissions unit is controlled by the East or West Venturi Scrubber. If the total emission test results from all emissions units operating during the emission test controlled by the East or West Venturi Scrubber and/or Slipstick Baghouse are less than the total allowable emission limitation from all East or WestCPS Primary Area emissions units controlled by the East or West Venturi Scrubber and/or Slipstick Baghouse, the emissions unit shall be deemed in compliance with the pound per hour limitation, provided that all emissions units operating during the emission test controlled by the East or West Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities.

If this emissions unit is vented to the East Venturi Scrubber, any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

If this emissions unit is vented to the West Venturi Scrubber, any emissions units that are not considered part of the West CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The West CPS Primary Production Area shall be defined as consisting of emissions units P002 and P005. The West CPS Primary Production Area

includes emissions unit P004 only when the emissions unit is venting to the West Venturi Scrubber.

See f)(2) below.

c. Emission Limitations:

Particulate emissions shall not exceed 0.04 ton/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

- (2) Emissions testing was performed on December 19, 2001 and November 11, 2003. Therefore, no additional testing is needed at this time unless required by Ohio EPA or Cleveland DAQ.

While P004 is venting to the East Venturi Scrubber:

Emissions units P001, P004, P006, P007, and P018 (East CPS Primary Production Area) are consecutive process operations venting to two common control devices. These common control devices include the East Venturi Scrubber and Slipstick Baghouse. Since the individual particulate emissions from P004 cannot be determined due to multiple emission sources sharing common control devices, the individual allowable emissions limitation from each emissions unit (P001, P004, P006, P007, and P018) operating during the emissions test shall be summed and compared with the test(s) results for the emissions units controlled by the East Venturi Scrubber and/or Slipstick Baghouse in order to determine compliance with the pound per hour limitation for P004, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P004, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

While P004 is venting to the West Venturi Scrubber:

Emissions units P002, P004, and P005 (West CPS Primary Production Area) are consecutive process operations venting to two common control devices. These common control devices include the West Venturi Scrubber and Slipstick Baghouse. Since the individual particulate emissions from P004 cannot be determined due to multiple emission sources sharing common control devices, the individual allowable emissions limitation from each emissions unit (P002, P004, and P005) operating during the emissions test shall be summed and compared with the test(s) results for the emissions units controlled by the West Venturi Scrubber and/or Slipstick Baghouse in order to



determine compliance with the pound per hour limitation for P004, provided that all emissions units operating during the emission test controlled by the West Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the West CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The West CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the West Venturi Scrubber.

g) Miscellaneous Requirements

- (1) None.

**3. P005, Litzler #2**

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

Dryer #1, equipped with a Venturi Scrubber

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

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

a. d)(6) – d)(9), and e)(4)

(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 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.21 lb/hr and 0.94 ton/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the scrubber stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.
e.	OAC rule 3745-114-01	See d)(6) – d)(9), and e)(4) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate a venturi wet scrubber for control of particulate and ammonia emissions while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment 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 pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than 10 pounds per square inch (gauge).
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber water recirculation flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 35 gallons per minute.
- (3) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water recirculation flow rate while the emissions unit is in operation. The monitoring devices and any recorders 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.

- (4) The permittee shall collect and record the following information each day:
  - a. the pressure drop across the scrubber, in inches of water, on a daily basis; and
  - b. the scrubber water recirculation flow rate, in gallons per minute, on a daily basis.
- (5) The permittee shall maintain records for any day during which the scrubber was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.
- (6) The federally enforceable permit-to-install and operate (FEPTIO) application for this/these emissions unit(s), P005, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
  - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “24” hours per day and “7” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

**Toxic Contaminant:** Ammonia/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 17.41 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.04 (\*for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 2.06

MAGLC (µg/m<sup>3</sup>): 414.5

The permittee, has demonstrated that emissions of the worst-case contaminant(s) modeled, from emissions unit(s) P005, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (7) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the

document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or scrubber water recirculation flow rate was outside of the appropriate range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland DAQ.

- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.21 lb/hr.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

The emissions unit is controlled by the West Venturi Scrubber. If the total emission test results from all emissions units operating during the emission test controlled by the West Venturi Scrubber and/or Slipstick Baghouse are less than the total allowable emission limitation from all West CPS Primary Area emissions units controlled by the West Venturi Scrubber and/or Slipstick Baghouse, the emissions unit shall be deemed in compliance with the pound per hour limitation, provided that all emissions units operating during the emission test controlled by the West Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the West CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The West CPS Primary Production Area shall be defined as consisting of emissions units P002 and P005. The West CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the West Venturi Scrubber.

See f)(2) below.

c. Emission Limitation:

Particulate emissions shall not exceed 0.94 ton/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

- (2) Emissions testing was performed on November 11, 2003. Therefore, no additional testing is needed at this time unless required by Ohio EPA or Cleveland DAQ.

Emissions units P002 and P005 (West CPS Primary Production Area includes P004 only if the emissions unit is venting to the East Venturi Scrubber) are consecutive process operations venting to two common control devices. These common control devices include the West Venturi Scrubber and Slipstick Baghouse. Since the individual particulate emissions from P005 cannot be determined due to multiple emission sources sharing common control devices, the individual allowable emissions limitation from each emissions unit (P002, P005, and P004 if the emissions unit is venting to the West Venturi Scrubber ) operating during the emissions test shall be summed and compared with the test(s) results for the emissions units controlled by the West Venturi Scrubber and/or Slipstick Baghouse in order to determine compliance with the pound per hour limitation for P005, provided that all emissions units operating during the emission test controlled by the West Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the West CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The West CPS Primary Production Area shall be defined as consisting of emissions units P002 and P005. The West CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the West Venturi Scrubber.

g) Miscellaneous Requirements

- (1) None.

**4. P006, Thermovation Dryer for 18-1**

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

Dryer #2, equipped with a Venturi Scrubber

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

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

a. d)(6) – d)(9), and e)(4)

(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 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.21 lb/hr and 0.94 ton/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the scrubber stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.
e.	OAC rule 3745-114-01	See d)(6) – d)(9), and e)(4) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate a venturi wet scrubber for control of particulate and ammonia emissions while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment 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 pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than 10 pounds per square inch (gauge).
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber water recirculation flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 35 gallons per minute.
- (3) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water recirculation flow rate while the emissions unit is in operation. The monitoring devices and any recorders 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.

- (4) The permittee shall collect and record the following information each day:
  - a. the pressure drop across the scrubber, in inches of water, on a daily basis; and
  - b. the scrubber water recirculation flow rate, in gallons per minute, on a daily basis.
- (5) The permittee shall maintain records for any day during which the scrubber was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.
- (6) The federally enforceable permit-to-install and operate (FEPTIO) application for this/these emissions unit(s), P006, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
  - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “24” hours per day and “7” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

**Toxic Contaminant:** Ammonia/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 17.41 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.04 (\*for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 2.06

MAGLC (µg/m<sup>3</sup>): 414.5

The permittee, has demonstrated that emissions of the worst-case contaminant(s) modeled, from emissions unit(s) P006, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (7) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the

document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or scrubber water recirculation flow rate was outside of the appropriate range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland DAQ.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.21 lb/hr.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

The emissions unit is controlled by the East Venturi Scrubber. If the total emission test results from all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are less than the total allowable emission limitation from all East CPS Primary Area emissions units controlled by the East Venturi Scrubber and/or Slipstick Baghouse, the emissions unit shall be deemed in compliance with the pound per hour limitation, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

See f)(2) below.

c. Emission Limitation:

Particulate emissions shall not exceed 0.94 ton/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

- (2) Emissions testing was performed on December 19, 2001 and November 11, 2003. Therefore, no additional testing is needed at this time unless required by Ohio EPA or Cleveland DAQ.

Emissions units P001, P006, P007, and P018 (East CPS Primary Production Area includes P004 only if the emissions unit is venting to the East Venturi Scrubber) are consecutive process operations venting to two common control devices. These common control devices include the East Venturi Scrubber and Slipstick Baghouse. Since the individual particulate emissions from P006 cannot be determined due to multiple emission sources sharing common control devices, the individual allowable emissions limitation from each emissions unit (P001, P006, P007, P018, and P004 if the emissions unit is venting to the East Venturi Scrubber) operating during the emissions test shall be summed and compared with the test(s) results for the emissions units controlled by the East Venturi Scrubber and/or Slipstick Baghouse in order to determine compliance with the pound per hour limitation for P006, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

g) Miscellaneous Requirements

- (1) None.

**5. P007, Litzler Dryer**

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

Dryer #3, equipped with a Venturi Scrubber

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

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

a. d)(6) – d)(9), and e)(4)

(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 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.21 lb/hr and 0.94 ton/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the scrubber stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.
e.	OAC rule 3745-114-01	See d)(6) – d)(9), and e)(4) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate a venturi wet scrubber for control of particulate and ammonia emissions while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment 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 pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than 10 pounds per square inch (gauge).
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber water recirculation flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 35 gallons per minute.
- (3) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water recirculation flow rate while the emissions unit is in operation. The monitoring devices and any recorders 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.

- (4) The permittee shall collect and record the following information each day:
  - a. the pressure drop across the scrubber, in inches of water, on a daily basis; and
  - b. the scrubber water recirculation flow rate, in gallons per minute, on a daily basis.
- (5) The permittee shall maintain records for any day during which the scrubber was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.
- (6) The federally enforceable permit-to-install and operate (FEPTIO) application for this/these emissions unit(s), P007, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
  - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “24” hours per day and “7” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

**Toxic Contaminant:** Ammonia/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 17.41 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.04 (\*for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 2.06

MAGLC (µg/m<sup>3</sup>): 414.5

The permittee, has demonstrated that emissions of the worst-case contaminant(s) modeled, from emissions unit(s) P007, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (7) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the

document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or scrubber water recirculation flow rate was outside of the appropriate range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland DAQ.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.21 lb/hr.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

The emissions unit is controlled by the East Venturi Scrubber. If the total emission test results from all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are less than the total allowable emission limitation from all East CPS Primary Area emissions units controlled by the East Venturi Scrubber and/or Slipstick Baghouse, the emissions unit shall be deemed in compliance with the pound per hour limitation, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting to the East Venturi Scrubber.

See f)(2) below.



c. Emission Limitation:

Particulate emissions shall not exceed 0.94 ton/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

- (2) The emissions testing requirement was fulfilled on August 24-25, 2006. Therefore, no additional testing is required after the issuance of this renewal permit unless required by Ohio EPA or Cleveland DAQ.

Emissions units P001, P006, P007, and P018 (East CPS Primary Production Area includes P004 only if the emissions unit is venting to the East Venturi Scrubber) are consecutive process operations venting to two common control devices. These common control devices include the East Venturi Scrubber and Slipstick Baghouse. Since the individual particulate emissions from P007 cannot be determined due to multiple emission sources sharing common control devices, the individual allowable emissions limitation from each emissions unit (P001, P006, P007, P018, and P004 if the emissions unit is venting to the East Venturi Scrubber) operating during the emissions test shall be summed and compared with the test(s) results for the emissions units controlled by the East Venturi Scrubber and/or Slipstick Baghouse in order to determine compliance with the pound per hour limitation for P007, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary production area connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P006, P007, and P018. The East CPS Primary Production Area includes emissions unit P004 only when the emissions unit is venting East Venturi Scrubber.

g) Miscellaneous Requirements

- (1) None.

**6. P008, Blend Transfer System**

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

Blending and Loading station, equipped with a baghouse

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

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

a. None.

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

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-03592 issued 9/11/2008	Particulate emissions shall not exceed 0.50 lb/hr and 2.19 tons/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate a baghouse for control of particulate emissions while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (2) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the baghouse while the emissions unit is in operation. The monitoring devices and any recorders 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. The permittee shall record the pressure drop across the baghouse on a daily basis while the emissions unit is in operation.
- (3) The permittee shall maintain records for any day during which the baghouse was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard

copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit

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

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

Emission Limitation:

Particulate emissions shall not exceed 0.50 lb/hr.

Applicable Compliance Method:

Compliance shall be based upon use of the following equation:

$$E = UE \times (1 - CE)$$

Where,

E = emission rate in lb/hr

UE = Uncontrolled emission rate in lb/hr

CE = % efficiency of the control equipment

UE = 6.02 lb/hr (Based on permittee's estimate)

CE = 0.98 (control equipment efficiency 98%)

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

b. Emission Limitation:

Particulate emissions shall not exceed 2.19 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate, E, by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

- g) Miscellaneous Requirements
  - (1) None.

**7. P009, Spencer Coke Recover**

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

Spencer Coke Recovery process, equipped with a baghouse

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.50 lb/hr and 2.19 tons/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate a baghouse for control of particulate emissions while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (2) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the baghouse while the emissions unit is in operation. The monitoring devices and any recorders 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. The permittee shall record the pressure drop across the baghouse on a daily basis while the emissions unit is in operation.
- (3) The permittee shall maintain records for any day during which the baghouse was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard

copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements



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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.50 lb/hr.

Applicable Compliance Method:

Compliance shall be based upon use of the following equation:

$$E = UE \times (1 - CE)$$

Where,

E = emission rate in lb/hr

UE = Uncontrolled emission rate in lb/hr

CE = % efficiency of the control equipment

UE = 3.76 lb/hr (Based on permittee's estimate)

CE = 0.99 (control equipment efficiency 99%)

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

c. Emission Limitation:

Particulate emissions shall not exceed 2.19 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate, E, by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

- g) Miscellaneous Requirements
  - (1) None.

**8. P010, IMC Dust Collector**

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

Billet machining area, equipped with two (2) baghouses

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 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.50 lb/hr and 2.19 tons/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the baghouse stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) For each piece of equipment connected to a baghouse, the permittee shall operate an associated baghouse for the control of particulate emissions while each piece of equipment is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (2) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the baghouse while the emissions unit is in operation. The monitoring devices and any recorders 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. The permittee shall record the pressure drop across the baghouse on a daily basis while the emissions unit is in operation.
- (3) The permittee shall maintain records for any day during which any baghouse was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept

hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.50 lb/hr.

Applicable Compliance Method:

Compliance shall be based upon use of the following equation:

$$E = UE \times (1 - CE)$$

Where,

E = emission rate in lb/hr

UE = Uncontrolled emission rate in lb/hr

CE = % efficiency of the control equipment

UE = 2.05 lb/hr (Based on permittee's estimate)

CE = 0.98 (control equipment efficiency 98%)

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

c. Emission Limitation:

Particulate emissions shall not exceed 2.19 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate, E, by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

- g) Miscellaneous Requirements
  - (1) None.

**9. P011, Heater/Finsh Cut Off**

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

Machining, grinding and cutting operation, equipped with two (2) baghouses

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 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.50 lb/hr and 2.19 tons/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the baghouse stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) For each piece of equipment connected to a baghouse, the permittee shall operate an associated baghouse for the control of particulate emissions while each piece of equipment is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (2) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the baghouse while the emissions unit is in operation. The monitoring devices and any recorders 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. The permittee shall record the pressure drop across the baghouse on a daily basis while the emissions unit is in operation.
- (3) The permittee shall maintain records for any day during which any baghouse was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept

hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.50 lb/hr.

Applicable Compliance Method:

Compliance shall be based upon use of the following equation:

$$E = UE \times (1 - CE)$$

Where,

E = emission rate in lb/hr

UE = Uncontrolled emission rate in lb/hr

CE = % efficiency of the control equipment

UE = 17.8 lb/hr (Based on permittee's estimate)

CE = 0.98 (control equipment efficiency 98%)

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

c. Emission Limitation:

Particulate emissions shall not exceed 2.19 tons/yr.



Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate, E, by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

- g) Miscellaneous Requirements
  - (1) None.

**10. P013, Crush Mill & Screen**

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

Crush Mill and Screen Area with operations including solids crushing, milling, grinding, blending and screening, equipped with four (4) baghouses

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 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.50 lb/hr and 2.19 tons/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the baghouse stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	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).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) For each piece of equipment connected to a baghouse, the permittee shall operate an associated baghouse for the control of particulate emissions while each piece of equipment is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (2) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the baghouse while the emissions unit is in operation. The monitoring devices and any recorders 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. The permittee shall record the pressure drop across the baghouse on a daily basis while the emissions unit is in operation.
- (3) The permittee shall maintain records for any day during which the baghouse was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required

documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range or exceeded the applicable limit contained in this permit; and
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.50 lb/hr.

Applicable Compliance Method:

Compliance shall be based upon use of the following equation:

$$E = UE \times (1 - CE)$$

Where,

E = emission rate in lb/hr

UE = Uncontrolled emission rate in lb/hr

CE = % efficiency of the control equipment

UE = 6.84 lb/hr (Based on permittee's estimate)

CE = 0.98 (control equipment efficiency 98%)

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

c. Emission Limitation:

Particulate emissions shall not exceed 2.19 tons/yr.



Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate, E, by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

- g) Miscellaneous Requirements
  - (1) None.

**11. P016, Furnace 17**

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

Pyrolytic Boron Nitride (PBN) furnace with dry vacuum pump systems all connected by ductwork to a packed tower wet scrubber

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-03910 issued 12/2/2004	Particulate emissions shall not exceed 2.41 tons/yr.  HCl emissions shall not exceed 0.20 lb/hr and 0.9 ton/yr.  Visible particulate emissions from the scrubber stack serving this emissions unit shall not exceed 5 percent 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 3745-31-05(D)	See c)(1) – c)(2) below.
d.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 0.551 lb/hr.

(2) Additional Terms and Conditions

- a. The hourly emission limitation for this emissions unit was established to reflect the potential to emit. This potential is based on a maximum production rate of this batch process. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with the hourly limits.

c) Operational Restrictions

- (1) The permittee shall operate a wet scrubber for the control of hydrochloric acid and particulate emission while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment is in operation.
- (3) The blow-down scrubber flow rate shall be continuously maintained at a value not less than 30 gallons per hour (hourly average of 0.5 gallons per minute) or otherwise in accordance to the manufacturer’s recommendation, while the emissions unit is in operation.
- (4) The recirculation scrubber water flow rate shall be continuously maintained at a value not less than 22 gallons per minute or otherwise in accordance to the manufacturer’s recommendation, while the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate and maintain equipment to monitor the scrubber water recirculation and blow-down flow rate while the emission unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, instructions and operating manuals, with any modification deemed necessary by the permittee.
- (2) The permittee shall collect and record the following information each day while the emissions unit is in operation:
  - a. the blow-down scrubber water flow rate, in gallons per hour, on a daily basis;

- b. the scrubber water recirculation flow rate, in gallons per minute, on a daily basis; and
  - c. the time and duration of all times the emissions unit was in operation and the scrubber was not operating and the corrective actions that were taken to resume operation of the control device.
- (3) The recirculation sump float switch for make-up scrubber water additions is equipped with an alert system to indicate if the recirculation water level is below three inches of the lowest travel position of the float arm switch. The permittee shall monitor and record the days when an alarm sounds on the recirculation sump float switch for make-up water additions.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the blow-down scrubber water flow rate;
    - ii. the scrubber water recirculation flow rate;
    - iii. the days when the alarm on the recirculation sump float switch for make-up scrubber water addition sounds; and
    - iv. all periods of time during which the emissions unit was in operation and the scrubber was not operating.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

- d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

- a. Emission Limitation:  
Particulate emissions shall not exceed 0.551 lb/hr.  
HCl emissions shall not exceed 0.20 lb/hr.

Applicable Compliance Method:  
Compliance with emission limitation shall be determined through procedures established in f)(2) below.

- b. Emission Limitation:  
Particulate emissions shall not exceed 2.41 tons/yr.  
HCl emissions shall not exceed 0.9 ton/yr.

Applicable Compliance Method:  
The ton per year limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, a compliance demonstration with the hourly limits shall also be a demonstration of compliance with the annual limits.

- c. Emission Limitation:  
Visible particulate emissions from the stack shall not exceed 5 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:  
If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the

procedures specified in OAC rule 3745-17-03(B)(1), if required by Ohio EPA or Cleveland DAQ.

- (2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months after issuance of the permit.
  - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for PE, HCL, and visible particulate emissions.
  - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):  
  
Methods 1-5 of 40 CFR Part 60, Appendix A for particulates  
  
Method 26A of 40 CFR Part 60, Appendix A for HCl  
  
Method 9 of 40 CFR Part 60, Appendix A for opacity  
  
Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland DAQ. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
  - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ 's refusal to accept the results of the emission test(s).
  - f. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.



- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

g) Miscellaneous Requirements

- (1) None.

**12. P017, Titanium DiBoride 680 KW electric furnace with baghouse**

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

Titanium Diboride 680 KW electric furnace vented to the east or west baghouse

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. d)(3) – d)(6), and e)(4)
  - (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 13-04172 issued 6/26/2003 and modified on 6/28/2005 and 4/15/2008	Particulate emissions (PE) shall not exceed 2.41 tons/yr. Carbon monoxide (CO) emissions shall not exceed 1.01 lb/hr and 4.42 tons/yr. Visible particulate emissions from the exhaust of the baghouse shall not exceed 10 percent opacity, as a six-minute average, during any sixty-minute observation period. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-11(A)(2).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A)	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).
c.	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 0.551 lb/hr.
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(3) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The pressure drop across the East Baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while this emissions unit is in operation and vented to the East Baghouse.
- (2) The pressure drop across the West Baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while this emissions unit is in operation and vented to the West Baghouse.
- (3) The permittee shall operate the East or West Baghouse for the control of particulate emissions while the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the East or the West 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), with any modification deemed necessary by the permittee. The permittee shall record the pressure drop across the East or the West Baghouse on a daily basis while the emissions unit is in operation.
- (2) The permittee shall inspect the East and/or the West Baghouses for leaks and visible fugitive particulate emissions at least once a month during operation periods. Records of such inspections shall include at a minimum the date the inspection was conducted, any and all results obtained, any problems discovered, and any corrective action taken.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. all periods of time during which the pressure drop across the East and/or West baghouse(s) did not comply with the allowable range specified above; and
    - ii. all periods of time during which the East and/or West Baghouse(s) had any leaks or visible fugitive particulate emissions.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation:  
Particulate emissions shall not exceed 0.551 lb/hr.
- Applicable Compliance Method:  
If required by the Ohio EPA or Cleveland DAQ, compliance with the lb/hr emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA approved test methods may be used with the prior approval from Ohio EPA or Cleveland DAQ.
- b. Emission Limitation:  
Particulate emissions shall not exceed 2.41 tons/yr.
- Applicable Compliance Method:  
The annual emission limitation was established by multiplying the hourly emission rate by 8760 hour of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.
- c. Emission Limitation:  
CO emissions shall not exceed 1.01 lb/hr.
- Applicable Compliance Method:  
If required by the Ohio EPA or Cleveland DAQ, compliance with the lb/hr emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10. Alternative U.S. EPA approved test methods may be used with the prior approval from Ohio EPA or Cleveland DAQ.
- d. Emission Limitation:  
CO emissions shall not exceed 4.42 tons/yr.
- Applicable Compliance Method:  
The annual emission limitation was established by multiplying the hourly emission rate by 8760 hour of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.



- e. Emission Limitation:  
Visible particulate emissions from the exhaust of the East and/or West Baghouse(s) shall not exceed 10 percent opacity, as a six-minute average, during any sixty-minute observation period.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance shall be determined by visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA Reference Method 9. Alternative U.S. EPA approved test methods may be used with the prior approval from the Ohio EPA or Cleveland DAQ.

- g) Miscellaneous Requirements

- (1) None.

**13. P018, Calciner 18-2**

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

18 inch Natural Gas Fired Calciner, equipped with a Venturi scrubber and baghouse

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. d)(7) – d)(10), and e)(4)
  - (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 13-04350 issued 8/24/2004 and modified on 5/18/2006 and 6/26/2007	Particulate emissions shall not exceed 2.93 tons/yr. NOx emissions shall not exceed 2.41 lbs/hr and 10.56 tons/yr.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B).
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack associated with this emission unit shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 0.67 lbs/hr.
d.	OAC rule 3745-31-05(D) FEPTIO to avoid Title V.	See c)(1) – c)(2) below.
e.	OAC rule 3745-114-01	See d)(7) – d)(10), and e)(4) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate the baghouse for control of particulate emission while the emission unit is in operation.
- (2) The permittee shall operate the Venturi scrubber for control of particulate and ammonia emissions while the emission unit is in operation.
- (3) The emissions unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm sounds, the emission unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (2) The permittee shall operate, and maintain equipment to monitor the pressure drop across the baghouse while the emission 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), with any modifications deemed necessary by the permittee.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than 10 pounds per square inch (gauge).
- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber water recirculation flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 35 gallons per minute.

- (5) The permittee shall properly operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water recirculation flow rate while the emission unit is in operation. The monitoring devices and any recorders 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.
- (6) The permittee shall collect and record the following information each day:
- a. the pressure drop across the scrubber, in inches of water, on a daily basis;
  - b. the recirculation scrubber water flow rate, in gallons per minute, on a daily basis; and
  - c. the pressure drop across the baghouse on a daily basis.

The permittee shall maintain records for any day during which the scrubber and/or baghouse was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.

- (7) The FEPTIO for this emissions unit, P018, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “X” hours per day and “Y” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

**Toxic Contaminant: Ammonia** w/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 17.41 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.7 (\*for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 173.7

MAGLC (µg/m<sup>3</sup>): 414.5

The permittee, has demonstrated that emissions of the worst case contaminant(s) modeled, from emissions unit(s) P018, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (8) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (9) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (10) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the

document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. any record showing that the scrubber and/or baghouse was not in service when the emissions unit was in operation;
    - ii. any exceedances of the pressure drop range for the baghouse or scrubber; and
    - iii. any deviations of the scrubber recirculation flow rate.
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no

changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

a. Emission Limitation:

Particulate emissions shall not exceed 2.93 tons/yr.

Applicable Compliance Method:

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

b. Emission Limitation:

NOx emissions shall not exceed 2.41 lbs/hr.

Applicable Compliance Method:

The hourly emission limitation was established by using results of an engineering stack test conducted by GE Quartz, Inc. on October 4, 2006.

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated by performing a stack test using U.S. EPA Methods 1-4 and 7E.

c. Emission Limitation:

NOx emissions shall not exceed 10.56 tons/yr.

Applicable Compliance Method:

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

d. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

e. Emission Limitation:

Particulate emissions shall not exceed 0.67 lb/hr.



Applicable Compliance Method:

The emissions unit is controlled by the East Venturi Scrubber and the Slipstick Baghouse. If the total emission test results from all emission units operating during the emissions test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are less than the total allowable emission limitation from all East CPS Primary Area emissions units controlled by the East Venturi Scrubber and/or the Slipstick Baghouse, the emissions unit shall be deemed in compliance with the pound per hour limitation, provided that all emissions units operating during the emission test controlled by the East Venturi Scrubber and/or Slipstick Baghouse are operating at or near their maximum capacities. Any emissions units that are not considered part of the East CPS Primary Production are connected to the Slipstick Baghouse shall not be operating during the emissions testing. The East CPS Primary Production Area shall be defined as consisting of emissions units P001, P004, P006, P007, and P018.

If required by Ohio EPA or Cleveland DAQ, compliance with the lb/hr emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

- g) Miscellaneous Requirements
  - (1) None.

**14. P033, PBN Furnace Unit No. 5 A/B**

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

One (1) PBN furnace unit (No. 5 A/B) with dry vacuum pump system connected by ductwork to packed tower wet scrubbers, known as the HCl scrubber and the HCN scrubber

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

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

a. d)(8) – d)(11), and e)(4)

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed 0.02 lb/hr and 0.09 ton/yr. PM <sub>10</sub> emissions shall not exceed 0.02 lb/hr and 0.09 ton/yr. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)b. below.
c.	OAC rule 3745-31-05(D) PTI 13-04609 issued 6/12/2007	Particulate emissions shall not exceed 0.02 lb/hr and 0.09 ton/yr. PM <sub>10</sub> emissions shall not exceed 0.02 lb/hr and 0.09 ton/yr. These limits apply after SIP is approved and BAT no longer applies.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack associated with this emission unit shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)	The particulate emission limit specified by this rule is less stringent than the particulate emission limit established pursuant to OAC rules 3745-31-05(A)(3) and 3745-31-05(D).
f.	OAC rule 3745-114-01	See d)(8) – d)(11), and e)(4) below.

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

FEPTIO permit P0117596 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

- i. PE emissions shall not exceed 0.02 lb/hr and 0.09 ton/yr,
- ii. PM<sub>10</sub> emissions shall not exceed 0.02 lb/hr and 0.09 ton/yr, and
- iii. the use of packed tower wet scrubbers (HCl and HCN scrubbers).

c) Operational Restrictions

- (1) As specified by the permittee, the MAPCO scrubber installed in November 2001 is referred to in this permit as “the HCl scrubber”, and the MAPCO scrubber installed in January 2006 is referred to in this permit as “the HCN scrubber”. The permittee shall operate the HCl scrubber for the control of hydrochloric acid and particulate emission and the HCN scrubber for the control of hydrogen cyanide while the emissions unit is in operation.

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

- (1) The permittee shall properly operate, and maintain equipment to continuously monitor and record the recirculation scrubber water flow rate, blow down scrubber flow rate and pH for the HCN scrubber during operation of this emission unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instruction, and operating manual(s), with any modifications deemed necessary by the permittee. The permittee shall record the recirculation scrubber water flow rate, the blow down scrubber flow rate and the pH for the HCN scrubber on a daily basis.
- (2) The permittee shall properly operate, and maintain equipment to continuously monitor and record the recirculation scrubber water flow rate, blow down scrubber flow rate and pH for the HCl scrubber during operation of this emission unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instruction, and operating manual(s), with any modifications deemed necessary by the permittee. The permittee shall record the recirculation scrubber water flow rate, the blow down scrubber flow rate and the pH for the HCN scrubber on a daily basis.
- (3) Whenever the monitored value for the recirculation scrubber water flow rate, blow down scrubber flow rate and/or pH for the HCN scrubber and the recirculation scrubber water flow rate and/or blow down scrubber flow rate for the HCL scrubber deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
- (4) 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 ranges specified below, unless the permittee determines that corrective action is not necessary and documents the records of the following information for each corrective action taken: a description of the corrective action, the date it was complete, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the recirculation scrubber water flow rate, blow down scrubber flow rate and/or pH reading for the HCN scrubber and the recirculation scrubber water flow rate and/or blow down scrubber flow rate for the HCl scrubber immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
- (5) The acceptable range for the recirculation scrubber water flow rate, blow down scrubber flow rate, and pH for the HCN scrubber and the recirculation scrubber water flow rate and blow down scrubber flow rate for the HCl scrubber shall be based upon the manufacturer's specifications with any modifications deemed necessary by the permittee.

- (6) The ranges are effective for the durations of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revision to the ranges based upon information obtained during future emission tests that demonstrate compliance with the allowable HCL, HCN and particulate emission rates for this emissions unit. In addition, approved revisions to the ranges 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”.
- (7) In the HCl scrubber, the recirculation sump pump float switch for make-up scrubber water additions is equipped with an alert system to indicate if the recirculation water level is below three inches of the lowest travel position of the float arm switch. The permittee shall monitor and record days when an alarm sounds on the recirculation sump float switch for make-up water additions.
- (8) The federally enforceable permit-to-install and operate (FEPTIO) application for this/these emissions unit(s), P033, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) “Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices”;  
or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) “Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices”; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
  - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “24” hours per day and “7” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

**Toxic Contaminant:** HClw/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 2.2 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.30

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 38.43

MAGLC (µg/m<sup>3</sup>): 52.35

**Toxic Contaminant:** HCNw/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 3.8 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 32.66

MAGLC (µg/m<sup>3</sup>): 91.18

The permittee, has demonstrated that emissions of the worst-case contaminant(s) modeled, from emissions unit(s) P033, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time when the recirculation scrubber water flow rate, blow down scrubber flow rate and/or pH for the HCN scrubber and/or the recirculation scrubber water flow rate and/or blow down scrubber flow rate for the HCl scrubber was outside of the range of the manufacturer;
    - ii. an identification of each incident of deviation described in (i) where a prompt investigation was not conducted;
    - iii. an identification of each incident of deviation described in (i) where prompt corrective action, that would bring the recirculation scrubber water flow rate, the blow down scrubber flow rate and/or the pH into compliance with the acceptable ranges, was determined to be necessary and was not taken;
    - iv. an identification of each incident of deviation described in (i) where proper records were not maintained for the investigation and/or the corrective action;
    - v. the days when the alarm on the recirculation sump float switch for make-up scrubber water additions sounds for the HCl scrubber; and
    - vi. any record showing that the emission unit was in operation and the HCN scrubber and/or the HCl scrubber were not operating.
  - b. the probable cause of each deviation (excursion);

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

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

- a. Emission Limitation:  
Particulate emission (PE) shall not exceed 0.02 lb/hr.  
PM<sub>10</sub> emissions shall not exceed 0.02 lb/hr.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03(B)(10). The results of the emission test shall be reported in terms of pounds per hour.

- b. Emission Limitation:  
Particulate emission (PE) shall not exceed 0.09 ton/yr.  
PM<sub>10</sub> emissions shall not exceed 0.09 ton/yr.



Applicable Compliance Method:

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

c. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

g) Miscellaneous Requirements

- (1) None.

**15. P038, Vortec Mill #2**

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

Vortec Mill #2 controlled with baghouse.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) June 30, 2008	Particulate emissions shall not exceed 0.62 lb/hr and 2.72 tons/yr.  PM <sub>10</sub> emissions shall not exceed 0.62 lb/hr and 2.72 tons/yr.  See b)(2)a below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE/PM <sub>10</sub> emissions from this emissions unit since the potential to emit is less than 10 tons/year taking into account the federally enforceable restriction in b)(1)c. below.  See b)(2)b below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(D) PTI 13-04689 issued 7/3/2007	Particulate emissions shall not exceed 0.62 lb/hr and 2.7 tons/yr.  PM <sub>10</sub> emissions shall not exceed 0.62 lb/hr and 2.7 tons/yr.  These limits apply after SIP is approved and BAT no longer applies.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack associated with this emission unit shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)(1)	The particulate emission limit specified by this rule is less stringent than the particulate emission limit established pursuant to OAC rules 3745-31-05(A)(3) and 3745-31-05(D).

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

FEPTIO permit P0117596 for this emissions unit takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

- i. PE emissions shall not exceed 0.62 lb/hr and 2.7 tons/yr,
- ii. PM<sub>10</sub> emissions shall not exceed 0.62 lb/hr and 2.7 tons/yr, and
- iii. the use of a baghouse.

c) Operational Restrictions

- (1) The permittee shall operate the baghouse for the control of particulate emissions while the emissions unit is in operation.

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

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.5 to 6.0 inches of water.
- (2) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily 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 the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

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

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

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

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

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. 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 a minor permit modification.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
    - iii. each incident of deviation described in "i" (above) where a prompt investigation was not conducted;
    - iv. each incident of deviation described in "i" 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



- v. each incident of deviation described in "i" 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.
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

- a. Emission Limitation:  
Particulate emission (PE) shall not exceed 0.62 lb/hr.  
PM<sub>10</sub> emissions shall not exceed 0.62 lb/hr.

Applicable Compliance Method:  
Compliance with the emission limitation shall be determined by using the following equation:

$$E = UE \times (1 - CE)$$

Where,

E = Emissions rate (lbs/hr)

UE = Uncontrolled emission rate in lb/hr \*



CE = % efficiency of the control equipment \*

\*Determined from mass-balance analysis or from the most recent stack test that demonstrated compliance.

UE = 12.25 lbs/hr (from permittee's mass-balance analysis)

CE = 0.95 (control equipment efficiency 95% per engineering estimate)

If required by Ohio EPA or Cleveland DAQ, compliance shall be determined by performing a stack test using Methods 1-5 of 40 CFR Part 60, Appendix A.

- b. Emission Limitation:  
Particulate emission (PE) shall not exceed 2.72 tons/yr.  
PM<sub>10</sub> emissions shall not exceed 2.72 tons/yr.

Applicable Compliance Method:

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

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

- g) Miscellaneous Requirements  
(1) None.

**16. P044, Calciner 18-3**

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

Boron nitride natural gas fired calciner in spot #3. Calciner 18-3

- 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. d)(3) – d)(6), and e)(4)
  - (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.	Ohio Revised Code (ORC) 3704.03(T)	Emissions of nitrogen oxides (NOx) shall not exceed 2.41 lbs/hr.
b.	OAC rule 3745-31-05(A)(3), as effective 6/30/2008. PTIO P0108192 issued 12/8/2011	Particulate emissions (PE) shall not exceed 0.67 lb/hr and 2.93 tons/yr.  Particulate matter 10 microns in diameter (PM <sub>10</sub> ) shall not exceed 0.67 lb/hr and 2.93 tons/yr.  Carbon monoxide (CO) emissions shall not exceed 0.52 lb/hr and 2.28 tons/yr.  See b)(2)a below.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/2008.	See b)(2)b below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-31-05(D)	<p>Particulate emissions (PE) shall not exceed 0.67 lb/hr and 2.93 tons/yr.</p> <p>Particulate matter 10 microns in diameter (PM<sub>10</sub>) shall not exceed 0.67 lb/hr and 2.93 tons/yr.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.52 lb/hr and 2.28 tons/yr.</p> <p>See c)(1) – c)(2) below.</p> <p>These limits apply after the SIP is approved and the BAT limits from b)(1)b. no longer apply.</p>
e.	OAC rule 3745-17-07(A)(1)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by the rule.
f.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in accordance with this rule is less stringent than the particulate emission limitation established pursuant to of OAC rule 3745-31-05(A)(3), and 3745-31-05(D).
g.	OAC rule 3745-114-01	See d)(3) – d)(6), and e)(4) below.

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the SO<sub>2</sub>, VOC and CO from this emissions unit since the uncontrolled potential to emit for SO<sub>2</sub>, VOC and CO is less than 10 tons/yr.

FEPTIO permit P0117596 for this emissions unit takes into account the following voluntary restrictions (including the use of any applicable air pollution control

equipment) as proposed by the permittee for the purposes of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for particulate emissions:

- i. the use of a baghouse; and
- ii. the use of a Venturi scrubber.

c) Operational Restrictions

- (1) The PE/PM<sub>10</sub> emissions from this emissions unit shall be vented to a baghouse at all times the emissions unit is in operation.
- (2) The PE/PM<sub>10</sub>, CO, NO<sub>x</sub> and NH<sub>3</sub> emissions from this emissions unit shall be vented to a wet scrubber at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily 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. 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 baghouse is 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 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 a minor permit modification.

- (2) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge) and the scrubber liquid flow rate (in gallons per minute) during operation of this/these emissions unit(s), including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber and the scrubber liquid's flow rate on daily 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. The acceptable range or limit for the pressure drop across the scrubber and the scrubber liquid flow rate shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;

- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop and 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 pressure drop and 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 pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

- (3) The FEPTIO application for this emissions unit, P044, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

**Toxic Contaminant: Ammonia** w/ option\* to list all toxics, covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 17.4 (\*for which toxic, if using worst case)

Maximum Hourly Emission Rate (lbs/hr): 0.70 (\*for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m<sup>3</sup>): 67.67

MAGLC (µg/m<sup>3</sup>): 414

The permittee, has demonstrated that emissions of Ammonia, from emissions unit(s) P044, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (4) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (5) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
  - (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
    - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
      - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer or outside of the acceptable range following any compliance demonstration;
      - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
      - iii. each incident of deviation described in "i" (above) where a prompt investigation was not conducted;
      - iv. each incident of deviation described in "i" 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;

- v. each incident of deviation described in “i” 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;
  - vi. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or the liquid flow rate was/were outside of the appropriate range or exceeded the applicable limit specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
  - vii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
  - viii. each incident of deviation described in “vi” or “vii” (above) where a prompt investigation was not conducted;
  - ix. each incident of deviation described in “vi” or “vii” where prompt corrective action, that would bring the pressure drop and/or liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - x. each incident of deviation described in “vi” or “vii” 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;
- b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland DAQ.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

- a. Emissions Limitation:  
NOx emissions shall not exceed 2.41 lbs/hr.

Applicable Compliance Method:

The hourly emissions limitation was established by using results of a compliance stack test performed in October 2006.

If required by Ohio EPA or Cleveland DAQ, compliance with the NOx emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 7, as applicable, of 40 CFR Part 60, Appendix A.

- b. Emissions Limitation:  
PE shall not exceed 0.67 lb/hr.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the PE emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 5, as applicable, of 40 CFR Part 60, Appendix A.

- c. Emissions Limitation:  
PE shall not exceed 2.93 tons/yr.

Applicable Compliance Method:

Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

- d. Emissions Limitation:  
PM<sub>10</sub> emissions shall not exceed 0.67 lb/hr.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the PM<sub>10</sub> emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 201 or 201A, as applicable, of 40 CFR Part 60, Appendix A.



- e. Emissions Limitation:  
PM<sub>10</sub> emissions shall not exceed 2.93 tons/yr.

Applicable Compliance Method:

Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

- f. Emissions Limitation:  
CO emissions shall not exceed 0.52 lb/hr.

Applicable Compliance Method:

The hourly emissions limitation was established by using results of a compliance stack test performed in October of 2006.

If required by Ohio EPA or Cleveland DAQ, compliance with the CO emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 10, as applicable, of 40 CFR Part 60, Appendix A.

- g. Emissions Limitation:  
CO emissions shall not exceed 2.28 tons/yr.

Applicable Compliance Method:

Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

g) Miscellaneous Requirements

- (1) None.

**17. Emissions Unit Group -Powder Firing Lines A through F: P014, P039, P040, P041, P042, P043**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P014	Cosmetic Grade BN Powder Firing Line A, equipped with a baghouse
P039	Cosmetic and Industrial Grade BN Powder Firing Line B, equipped with a baghouse
P040	Cosmetic and Industrial Grade BN Powder Firing Line C, equipped with a baghouse
P041	Cosmetic and Industrial Grade BN Powder Firing Line D, equipped with a baghouse
P042	Cosmetic and Industrial Grade BN Powder Firing Line E, equipped with a baghouse
P043	Cosmetic and Industrial Grade BN Powder Firing Line F, equipped with a baghouse

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-03592 issued 4/19/2000 and modified 9/11/2008	Particulate emissions shall not exceed 0.44 lb/hr and 1.93 tons/yr. PM <sub>10</sub> emissions shall not exceed 0.43 lb/hr and 1.88 tons/yr. CO emissions shall not exceed 0.83 lb/hr and 3.64 tons/yr. The requirements of this rule also include



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		compliance with the requirements of OAC rule 3745-17-07(A). See c)(1) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by the rule.
c.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.
d.	OAC rule 3745-17-11(B)	The particulate emissions limitation specified in accordance with this rule is less stringent than the particulate emission limitation established pursuant to of OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall operate a baghouse for control of particulate emissions while the emissions unit is in operation.
- (2) The emission unit is equipped with an alert system to indicate if the control equipment is not operating while the emission unit is in operation. Once an alarm is indicated, the emission unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 10 inches of water.
- (2) The permittee shall properly operate, and maintain equipment to monitor the pressure drop across each baghouse while the emissions unit is in operation. 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 permittee shall record the pressure drop across each baghouse on a daily basis while the emissions unit is in operation.

- (3) The permittee shall maintain records for any day during which the baghouse was not in service when the emissions unit was in operation and the corrective actions that were taken to resume operation of the control device.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
  - i. each period of time (start time and date, and end time and date) when the pressure drop across each baghouse was outside of the appropriate range or exceeded the applicable limit contained in this permit; and
  - ii. 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 a baghouse.
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.



The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

a. Emission Limitation:

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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

b. Emission Limitation:

Particulate emissions shall not exceed 0.44 lb/hr.

Applicable Compliance Method:

The hourly emission limitation was established by using results of a compliance stack test performed on P028 on November 16, 2006

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 5. The results of the emissions test shall be reported in terms of pounds per hour.

c. Emission Limitation:

Particulate emissions shall not exceed 1.93 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

d. Emission Limitation:

PM<sub>10</sub> emissions shall not exceed 0.43 lb/hr.

Applicable Compliance Method:

The hourly emission limitation was established by using results of a compliance stack test performed on P028 on November 16, 2006

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 201A and 202. The results of the emissions test shall be reported in terms of pounds per hour.

e. Emission Limitation:

PM<sub>10</sub> emissions shall not exceed 1.88 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

f. Emission Limitation:

CO emissions shall not exceed 0.83 lb/hr.

Applicable Compliance Method:

The hourly emission limitation was established by using results of a compliance stack test performed on P014 on October 8 -11, 2012.

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10 or 10b as applicable. The results of the emissions test shall be reported in terms of pounds per hour.

g. Emission Limitation:

CO emissions shall not exceed 3.64 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.



**Final Permit-to-Install and Operate**  
Momentive Performance Materials Quartz Inc.  
**Permit Number:** P0117596  
**Facility ID:** 1318558216  
**Effective Date:** 2/19/2016

g) Miscellaneous Requirements

- (1) None.

**18. Emissions Unit Group -Powder Firing Lines G through R: P019, P020, P021, P022, P023, P024, P025, P026, P027, P028, P029, P030**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P019	Cosmetic and Industrial Grade BN Powder Firing Line - G, equipped with a baghouse
P020	Cosmetic And Industrial Grade BN Powder Firing Line - H, equipped with a baghouse
P021	Cosmetic And Industrial Grade BN Powder Firing Line - I, equipped with a baghouse
P022	Cosmetic And Industrial Grade BN Powder Firing Line - J, equipped with a baghouse
P023	Cosmetic And Industrial Grade BN Powder Firing Line - K, equipped with a baghouse
P024	Cosmetic And Industrial Grade BN Powder Firing Line - L, equipped with a baghouse
P025	Cosmetic And Industrial Grade BN Powder Firing Line - M, equipped with a baghouse
P026	Cosmetic And Industrial Grade BN Powder Firing Line - N, equipped with a baghouse
P027	Cosmetic and Industrial Grade BN Powder Firing Line - O, equipped with a baghouse
P028	Cosmetic and Industrial Grade BN Powder Firing Line - P, equipped with a baghouse
P029	Cosmetic and Industrial Grade BN Powder Firing Line - Q, equipped with a baghouse
P030	Cosmetic and Industrial Grade BN Powder Firing Line - R, equipped with a baghouse

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

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

a. d)(3) – d)(6), and e)(4)

(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 13-04549 issued 12/22/2005 and modified 9/11/2008 for P019-P027.  PTI 13-04572 issued 3/2/2006 and modified 9/11/2008 for P028-P030.	Particulate emissions shall not exceed 0.44 lb/hr and 1.93 tons/yr.  PM <sub>10</sub> emissions shall not exceed 0.43 lb/hr and 1.88 tons/yr.  CO emissions shall not exceed 0.83 lb/hr and 3.64 tons/yr.  Visible particulate emissions from any stack serving this emissions unit shall not exceed 10 percent opacity, as a six-minute average.  See b)(2)a. and c)(1) below.
b.	OAC rule 3745-17-07(A)	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).
c.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in accordance with this rule is less stringent than the particulate emission limitation established pursuant to of OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-31-05(D)	See c)(1) – c)(2) below.

(2) Additional Terms and Conditions

a. The short-term and annual emissions limitations were established based on potential to emit; therefore, no recordkeeping and/or reporting requirements are needed for these emissions limitations.

c) Operational Restrictions

(1) The permittee shall operate the baghouse for control of particulate emissions while the emissions unit is in operation.

(2) The emissions unit is equipped with an alert system to indicate if the control equipment is not operating while the emissions unit is in operation. Once an alarm is indicated, the emissions unit shall be shut down until the control equipment is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse during operation of this emissions unit, including periods of startup and shutdown. 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. The permittee shall record the pressure drop, in inches of water, across the baghouse on a daily basis while this emissions unit is in operation.

Whenever the monitored value for the pressure drop deviates from the range specified below, 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 and the magnitude of the deviation at that time,
- b. the date(s) the investigation was conducted,
- c. the names of the personnel who conducted the investigation, and
- d. 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 below, 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:

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

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

- (2) The acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer's specifications of 0.1 to 10.0 inches of water.

This range is 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 (Cleveland

DAQ). The permittee may request revisions to the range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across each baghouse was outside of the appropriate range or exceeded the applicable limit contained in this permit;
    - ii. 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 a baghouse;
    - iii. each incident of deviation described in "i" or "ii" (above) where a prompt investigation was not conducted;
    - iv. each incident of deviation described in "i" or "ii" 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
    - v. each incident of deviation described in "i" or "ii" 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.

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

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

- a. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

- b. Emission Limitation:

Particulate emissions shall not exceed 0.44 lb/hr.

Applicable Compliance Method:

The particulate emission limitation was determined based on stack test results from P028, Powder Firing Line P. The stack test was conducted on November 16, 2006.

If required by Ohio EPA or Cleveland DAQ, compliance with the emission limitation shall be demonstrated through emission tests performed in accordance

with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10). The results of the emissions test shall be reported in terms of pounds per hour.

c. Emission Limitation:

Particulate emissions shall not exceed 1.93 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

d. Emission Limitation:

PM<sub>10</sub> emissions shall not exceed 0.43 lb/hr.

Applicable Compliance Method:

The PM<sub>10</sub> limitation was determined based on stack test results from P028, Powder Firing Line P. The stack test was conducted on November 16, 2006.

If required by Ohio EPA or Cleveland DAQ, compliance with the emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 201 and 202. The results of the emissions test shall be reported in terms of pounds per hour.

e. Emission Limitation:

PM<sub>10</sub> emissions shall not exceed 1.88 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

f. Emission Limitation:

CO emissions shall not exceed 0.83 lb/hr.

Applicable Compliance Method:

The uncontrolled carbon monoxide emission limitation was determined based on stack test results from emissions unit P014. The stack test was conducted on October 8 – 11, 2012.



If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated by performing a stack test using U.S. EPA Methods 10 or 10b, as applicable. The results of the emissions test shall be reported in term of pounds per hour.

g. Emission Limitation:

CO emissions shall not exceed 3.64 tons/yr.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be shown provided compliance is maintained with the pounds per hour limitation.

g) Miscellaneous Requirements

- (1) None.

**19. Emissions Unit Group -Powder Firing Lines S through V: P045, P046, P047, P048**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P045	POWDER FIRING LINE S controlled by a baghouse
P046	POWDER FIRING LINE T controlled by a baghouse
P047	POWDER FIRING LINE U controlled by a baghouse
P048	POWDER FIRING LINE V controlled by a baghouse

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) June 30, 2008 PTIO P0108192 issued 12/8/2011	Particulate emissions (PE) shall not exceed 0.44 lb/hr and 1.93 tons/yr. PM <sub>10</sub> emissions shall not exceed 0.43 lb/hr and 1.88 tons/yr. Carbon monoxide (CO) emissions shall not exceed 0.83 lb/hr and 3.64 tons/yr. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/2008.	See b)(2)b. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(D)	<p>Particulate emissions (PE) shall not exceed 0.44 lb/hr and 1.93 tons/yr.</p> <p>PM<sub>10</sub> emissions shall not exceed 0.43 lb/hr and 1.88 tons/yr.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.83 lb/hr and 3.64 tons/yr.</p> <p>These limits apply after the SIP is approved and BAT no longer applies.</p> <p>See c)(1) below.</p>
d.	OAC rule 3745-17-07(A)(1)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by the rule.
e.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in accordance with this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3) and 3745-31-05(D).

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO emissions from this emissions unit since the uncontrolled potential to emit for CO is less than 10 tons/yr.



FEPTIO permit P0117596 for this emissions unit takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purposes of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for particulate emissions:

- i. the use of a baghouse.
- c) Operational Restrictions
- (1) The PE/PM<sub>10</sub> emissions from this emissions unit shall be vented to a baghouse at all times the emissions unit is in operation.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse, on a daily basis. The monitoring equipment shall be 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 baghouse, is 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 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.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Cleveland DAQ. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer or outside of the acceptable range following any required compliance demonstration;

- ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - iii. each incident of deviation described in "i" (above) where a prompt investigation was not conducted;
  - iv. each incident of deviation described in "i" 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
  - v. each incident of deviation described in "i" 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.
- b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

f) Testing Requirements

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

- a. Emission Limitation:  
PE shall not exceed 0.44 lb/hr.

Applicable Compliance Method:

The hourly emissions limitation was established by using results of a compliance stack test performed on November 16, 2006.



If required by Ohio EPA or Cleveland DAQ, compliance with the PE emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 5, as applicable, of 40 CFR Part 60, Appendix A.

- b. Emissions Limitation:  
PE shall not exceed 1.93 tons/yr.

Applicable Compliance Method:  
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

- c. Emissions Limitation:  
PM<sub>10</sub> emissions shall not exceed 0.44 lb/hr.

Applicable Compliance Method:  
The hourly emissions limitation was established by using results of a compliance stack test performed on November 16, 2006.

If required by Ohio EPA or Cleveland DAQ, compliance with the PM<sub>10</sub> emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 201 or 201A, as applicable, of 40 CFR Part 60, Appendix A.

- d. Emissions Limitation:  
PM<sub>10</sub> emissions shall not exceed 1.93 tons/yr.

Applicable Compliance Method:  
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

- e. Emissions Limitation:  
CO emissions shall not exceed 0.83 lb/hr.

Applicable Compliance Method:  
The hourly emissions limitation was established by using results of a compliance stack test performed on October 8 – 11, 2012 for emissions unit P014.

If required by Ohio EPA or Cleveland DAQ, compliance with the CO emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 10, as applicable, of 40 CFR Part 60, Appendix A.

- f. Emissions Limitation:  
CO emissions shall not exceed 3.64 tons/yr.

Applicable Compliance Method:  
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.



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

Applicable Compliance Method:

If required by Ohio EPA or Cleveland DAQ, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

- g) Miscellaneous Requirements
  - (1) None.