



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

12/2/2015

Randal Hines  
 PCC AIRFOILS, LLC.  
 3860 UNION AVE. S.E.  
 Minerva, OH 44657

Certified Mail

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1576000096  
 Permit Number: P0073910  
 Permit Type: Renewal  
 County: Stark

Dear Permit Holder:

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

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

**How to appeal this permit**

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

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

## **How to save money, reduce pollution and reduce energy consumption**

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

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/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.

If you have any questions, please contact Canton City Health Department at (330)489-3385 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: Canton



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
PCC AIRFOILS, LLC.**

Facility ID:	1576000096
Permit Number:	P0073910
Permit Type:	Renewal
Issued:	12/2/2015
Effective:	12/2/2015
Expiration:	1/24/2022





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

for  
PCC AIRFOILS, LLC.

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**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0073910  
**Facility ID:** 1576000096  
**Effective Date:** 12/2/2015

## Authorization

Facility ID: 1576000096  
Application Number(s): A0032679, A0032680, A0032681, A0047659, A0050917  
Permit Number: P0073910  
Permit Description: PTIO renewal permit for burnout mold firing ovens, electric induction furnaces, machining equipment, acid etching and associated equipment used in the production of investment castings.  
Permit Type: Renewal  
Permit Fee: \$0.00  
Issue Date: 12/2/2015  
Effective Date: 12/2/2015  
Expiration Date: 1/24/2022  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

PCC AIRFOILS, LLC.  
3860 UNION AVE. S.E.  
Minerva, OH 44657

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:

Canton City Health Department  
420 Market Avenue  
Canton, OH 44702-1544  
(330)489-3385

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: P0073910

Permit Description: PTIO renewal permit for burnout mold firing ovens, electric induction furnaces, machining equipment, acid etching and associated equipment used in the production of investment castings.

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

- Emissions Unit ID: P044**  
Company Equipment ID: LUMINOUS WALL FURNACE-BARN-Oxidizer  
Superseded Permit Number: 15-237  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P053**  
Company Equipment ID: Spinner Hanger-Barn  
Superseded Permit Number: 15-414  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P060**  
Company Equipment ID: Furnace  
Superseded Permit Number: P0073891  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P072**  
Company Equipment ID: Furnace  
Superseded Permit Number: 15-673  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P102**  
Company Equipment ID: Furnace  
Superseded Permit Number: 15-00495  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P103**  
Company Equipment ID: Furnace  
Superseded Permit Number: 15-541  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P105**  
Company Equipment ID: Furnace  
Superseded Permit Number: 15-01345  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P106**  
Company Equipment ID: Mold Firing Furnace Property ID 7850  
Superseded Permit Number: 15-01650  
General Permit Category and Type: Not Applicable

**Group Name: Acid Etch**

<b>Emissions Unit ID:</b>	<b>P078</b>
Company Equipment ID:	SCRUBBER - North Acid House-Acid Etch Line
Superseded Permit Number:	15-738
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
 PCC AIRFOILS, LLC.  
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<b>Emissions Unit ID:</b>	<b>P079</b>
Company Equipment ID:	Acid Etch Line
Superseded Permit Number:	15-1126
General Permit Category andType:	Not Applicable

**Group Name: Cutoff-Grinding**

<b>Emissions Unit ID:</b>	<b>P016</b>
Company Equipment ID:	ROTOCLONE-Wheelabrator-Blasters & Grinders
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P018</b>
Company Equipment ID:	ROTOCLONE-CUT-OFF
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P019</b>
Company Equipment ID:	MASTER METAL-Grinding
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P029</b>
Company Equipment ID:	ROTOCLONE-CENTRAL-Blast & Grinders
Superseded Permit Number:	
General Permit Category andType:	Not Applicable



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0073910  
**Facility ID:** 1576000096  
**Effective Date:** 12/2/2015

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0073910  
**Facility ID:** 1576000096  
**Effective Date:** 12/2/2015

## **B. Facility-Wide Terms and Conditions**



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0073910  
**Facility ID:** 1576000096  
**Effective Date:** 12/2/2015

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

**1. P044, LUMINOUS WALL FURNACE-BARN-Oxidizer**

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

Luminous wall wax burnout furnace with baghouse-Prototype Foundry (Barn)

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)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	0.551 lb PE/hr
d.	OAC rule 3745-18-06(E)	See b)(2)b.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements for this emission unit have been determined to be compliance with OAC rule 3745-17-07(A), OAC rule 3745-17-11(B) and compliance with the terms and conditions of this permit.

b. This emission unit is exempt from OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the rated capacity of the emission unit is less than 1000 pounds per hour.

- c) Operational Restrictions
  - (1) None.
- 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 1 to 6 inches of water.
  - (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on weekly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

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

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

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

- k. the name(s) of the personnel who performed the work.

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

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

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

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

a. Emission Limitation:

0.551 lb PE/hr

Applicable Compliance Method:

The hourly PE limitation (0.551 lb/hr) was determined by using a process weight rate (PWR) of 1.48 lb/hr in the following equation from OAC rule 3745-17-11, Table 1:  $E = 0.551$

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

b. Emission Limitation:

Visible PE from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

- (1) None.

**2. P053, Spinner Hanger-Barn**

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

Ceramic abrasive blast w/fabric filter; Spinner-hanger

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)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	0.59 lb PE/hr

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements for this emission unit have been determined to be compliance with OAC rule 3745-17-07(A), 3745-17-11 and compliance with the terms and conditions of this permit.

c) Operational Restrictions

(1) None.

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 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is 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 installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

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

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

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

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

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

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

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



a. Emission Limitation:

PE from the baghouse stack shall not exceed 0.59 lb/hr

Applicable Compliance Method:

Maximum process weight rate is 110 lb/hr or 0.055 TPH (per application)

$$E = 4.10 (P)^{0.67} = 4.10 (0.055)^{0.67} = 0.59 \text{ lb PE/hr}$$

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

b. Emission Limitation:

PE from the baghouse stack shall not exceed 2.58 TPY

Applicable Compliance Method:

The annual emission limitation was determined by multiplying the hourly emission limitation of 0.59 lb/hr by the maximum operating hours of 8,760 hrs/yr, and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emission Limitation:

Visible PE from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

- (1) None.

**3. P060, Furnace**

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

Vacuum induction melt furnace with filter; (CVC Furnace) Including charge handling, charging / melting and cooling.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
b.	OAC rule 3745-17-11(B)	1.58 lbs PE/hr
c.	OAC rule 3745-18-06(E)	See b)(2)a.

(2) Additional Terms and Conditions

a. This emission unit is exempt from OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the rated capacity of the emission unit is less than 1000 pounds per hour.

c) Operational Restrictions

(1) None.

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

(1) The permittee shall perform a daily check when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from any stack serving this emissions unit. The presence or absence of any visible emissions observed shall be noted in an operations log. If visible emissions are observed, the permittee shall also document the following in the operations log:

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

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(2) Notwithstanding the frequency of the monitoring and record keeping requirements specified in section d)(1), the permittee may reduce the visual observations from daily readings to weekly readings if the following are met:

- a. for 1 full quarter the facility's visual observations indicate no visible emissions; and
- b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section d)(1).

The permittee shall revert to daily readings if any visible emissions are observed.

e) **Reporting Requirements**

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section



of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in section d)(1) above:
  - a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

f) Testing Requirements

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

- a. Emission Limitation:

Visible PE from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:

1.58 lbs PE/hr

Applicable Compliance Method:

Using 0.24 T/hr as process weight rate of furnace as supplied by facility

$$E = 4.10 (P)^{0.67} = 4.10 (0.24)^{0.67} = 1.58 \text{ lb PE/hr}$$

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

g) Miscellaneous Requirements

- (1) None.

**4. P072, Furnace**

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

Vacuum induction melt furnace with filter; (Consarc) Including charge handling, charging / melting charge handling, charging / melting and cooling.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.018 lb/hr and 0.08 ton per year (TPY) from charging, melting and cooling.  See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-11(B)	The emissions limitation established by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-18-06(E)	See b)(2)b.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements for this emission unit have been determined to be compliance with OAC rule 3745-17-07(A) and compliance with the terms and conditions of this permit.
- b. This emission unit is exempt from OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the rated capacity of the emission unit is less than 1000 pounds per hour.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform a daily check when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from any stack serving this emissions unit. The presence or absence of any visible emissions observed shall be noted in an operations log. If visible emissions are observed, the permittee shall also document the following in the operations log:

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

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (2) Notwithstanding the frequency of the monitoring and record keeping requirements specified in section d)(1), the permittee may reduce the visual observations from daily readings to weekly readings if the following are met:

- a. for 1 full quarter the facility's visual observations indicate no visible emissions; and

- b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section d)(1).

The permittee shall revert to daily readings if any visible emissions are observed.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in section d)(1) above:
  - a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

f) Testing Requirements

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

PE shall not exceed 0.018 lb/hr and 0.08 TPY from charging, melting and cooling.

Applicable Compliance Methods:

The hourly emission limitation was established by multiplying the maximum production rate of 0.24 ton/hr by an emission factor of 1.85 lbs of PE/ton of metal processed (AP-42 Table 12.13), then applying a control efficiency of 96.0%. If required, the permittee shall demonstrate compliance with the hourly emission limitation by testing in accordance with the Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation of 0.018 lb/hr by the maximum operating hours of 8,760 hrs/yr, and divided by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.



b. Emission Limitations:

Visible PE from the stack serving this emission unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Methods:

If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

- (1) None.

**5. P102, Furnace**

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

Wax/polystyrene natural gas fired burnout furnace with thermal oxidizer.

- 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)	0.151 particulate emissions (PE) lb/hr and 0.66 tons per year (TPY) PE.  Visible PE from any stack shall not exceed 5% opacity, as a 6-minute average.  See b)(2)a.
b.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-18-06(E)	See b)(2)b.

- (2) Additional Terms and Conditions
  - a. The Best Available Technology (BAT) requirements for this emission unit have been determined to be the use of an afterburner, the use of natural gas and compliance with the terms and conditions of this permit.
  - b. This emission unit is exempt from OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the rated capacity of the emission unit is less than 1000 pounds per hour.
- c) Operational Restrictions
  - (1) This emissions unit shall be installed, operated, and maintained in accordance with the manufacturer's specifications. The permittee shall make no changes to the manufacturer's factory preset parameters for the emissions unit or physically modify the emissions unit in any way without prior verification from the manufacturer that the change(s) will not adversely affect air contaminant emissions from this unit.
  - (2) The furnace gases shall exhaust to an afterburner. The afterburner shall be operated for a minimum of the first hour of each cycle whenever molds are being processed in the furnace. Each furnace shall satisfy one of the following requirements:
    - a. The furnace shall be equipped with a low temperature sensor and alarm system for the afterburner; or
    - b. A daily maintenance log shall include scheduled operating hours of the afterburner and hourly temperature checks of the afterburner when it is operating.
  - (3) The permittee shall burn only natural gas in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) The permittee shall operate and maintain a continuous temperature sensor and alarm which measures the temperature of the exhaust gases within the afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
  - (2) The permittee shall collect and record the following information each day:
    - a. the occurrence of a low-temperature episode within the afterburner during the first hour of each operating cycle and what remedial action was taken to correct the problem.
  - (3) The permittee shall perform an annual inspection of the afterburner which shall include, but is not limited to, the following check points:

- a. refractory condition;
- b. burner condition;
- c. pressure seals condition;
- d. shell condition;
- e. auxiliary fuel piping train; and
- f. interlocks, electrically operated valves, shutoff dampers, gauges, continuous recorders, and thermocouples.

The permittee shall record notes of the condition(s) for each of the above items and note any corrective actions which were taken to maintain the afterburner in peak operating condition. The recorded entry shall include the name of the person performing the inspection, date and time, identification of the afterburner, and signature of the inspector. It is recommended that the forms contained in Ohio EPA's Operation and Maintenance (O&M) Guidelines for Air Pollution Control equipment be used as an aid to compiling the information required for this Condition.

- (4) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (5) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in section d)(4) above:
- a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emissions Limitation:  
Visible PE from any stack shall not exceed 5% opacity as a 6-minute average .  
Applicable Compliance Method:  
If required, compliance with the applicable stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR, Part 60, Appendix A.
  - b. Emissions Limitation:  
0.151 PE lb/hr and 0.66 TPY PE  
Applicable Compliance Method:  
If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with Methods 1 – 5 of 40 CFR, Part 60, Appendix A.



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0073910  
**Facility ID:** 1576000096  
**Effective Date:** 12/2/2015

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

g) Miscellaneous Requirements

- (1) None.

**6. P103, Furnace**

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

Natural gas fired wax burnout furnace w/thermal oxidizer.

- 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)	0.313 lb particulate emissions (PE)/hr and 1.37 tons per year (TPY) PE  0.228 lb nitrogen dioxides (NOx)/hr and 1.0 TPY NOx  Visible PE from any stack shall not exceed 5% opacity, as a 6-minute average.  See b)(2)a.
b.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-18-06(E)	See b)(2)b.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements for this emission unit have been determined to be the use of an afterburner, the use of natural gas and compliance with the terms and conditions of this permit.
- b. This emission unit is exempt from OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the rated capacity of the emission unit is less than 1000 pounds per hour.

c) Operational Restrictions

- (1) This emissions unit shall be installed, operated, and maintained in accordance with the manufacturer's specifications. The permittee shall make no changes to the manufacturer's factory preset parameters for the emissions unit or physically modify the emissions unit in any way without prior verification from the manufacturer that the change(s) will not adversely affect air contaminant emissions from this unit.
- (2) The furnace gases shall exhaust to a afterburner. The afterburner shall be operated for a minimum of the first hour of each cycle whenever molds are being processed in the furnace. Each furnace shall satisfy one of the following requirements:
  - a. The furnace shall be equipped with a low temperature sensor and alarm system for the afterburner; or
  - b. A daily maintenance log shall include scheduled operating hours of the afterburner and hourly temperature checks of the afterburner when it is operating.
- (3) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall operate and maintain a continuous temperature sensor and alarm which measures the temperature of the exhaust gases within the afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
- (2) The permittee shall collect and record the following information each day:
  - a. the occurrence of a low-temperature episode within the afterburner during the first hour of each operating cycle and what remedial action was taken to correct the problem;

- (3) The permittee shall perform an annual inspection of the afterburner which shall include, but is not limited to, the following check points:
- a. refractory condition;
  - b. burner condition;
  - c. pressure seals condition;
  - d. shell condition;
  - e. auxiliary fuel piping train; and
  - f. interlocks, electrically operated valves, shutoff dampers, gauges, continuous recorders, and thermocouples.

The permittee shall record notes of the condition(s) for each of the above items and note any corrective actions which were taken to maintain the afterburner in peak operating condition. The recorded entry shall include the name of the person performing the inspection, date and time, identification of the afterburner, and signature of the inspector. It is recommended that the forms contained in Ohio EPA's Operation and Maintenance (O&M) Guidelines for Air Pollution Control equipment be used as an aid to compiling the information required for this Condition.

- (4) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (5) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in section d)(4) above:
- a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emissions Limitation:  
Visible PE from any stack shall not exceed 5% opacity, as a 6-minute average .  
Applicable Compliance Method:  
If required, compliance with the applicable stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR, Part 60, Appendix A.
  - b. Emissions Limitations:  
0.313 lb PE/hr and 1.37 TPY PE  
Applicable Compliance Method:  
 $407 \text{ lbs (load)} \div 1.3 \text{ hrs (load cycle)} \times (0.1 \text{ lbs} / 100 \text{ lbs}) = 0.313 \text{ lb PE/hr}$   
If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with Methods 1 – 5 of 40 CFR, Part 60, Appendix A.



The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emissions Limitations:

0.228 lb NOx/hr and 1.0 TPY NOx

Applicable Compliance Method:

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

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

g) Miscellaneous Requirements

(1) None.

**7. P105, Furnace**

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

Natural gas-fired HMC Car Bottom Furnace with afterburner.

- 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)	0.61 lb particulate emissions (PE)/hr and 2.7 tons per year (TPY) PE  0.1 lb total organic compounds (TOC)/hr and 0.44 TPY TOC  0.5 lb nitrogen dioxides (NOx)/hr and 2.2 TPY NOx  0.44 lb carbon monoxide (CO)/hr and 1.93 TPY CO  Visible PE from any stack shall not exceed 5% opacity, as a 6-minute average.  See b)(2)a.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-18-06(E)	See b)(2)b.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements for this emission unit have been determined to be the use of an afterburner, the use of natural gas and compliance with the terms and conditions of this permit.
- b. This emission unit is exempt from OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the rated capacity of the emission unit is less than 1000 pounds per hour.

c) Operational Restrictions

- (1) This emissions unit shall be installed, operated, and maintained in accordance with the manufacturer's specifications. The permittee shall make no changes to the manufacturer's factory preset parameters for the emissions unit or physically modify the emissions unit in any way without prior verification from the manufacturer that the change(s) will not adversely affect air contaminant emissions from this unit.
- (2) The furnace gases shall exhaust to an afterburner. The afterburner shall be operated for a minimum of the first hour of each cycle whenever molds are being processed in the furnace. Each furnace shall satisfy one of the following requirements:
  - a. The furnace shall be equipped with a low temperature sensor and alarm system for the afterburner; or
  - b. A daily maintenance log shall include scheduled operating hours of the afterburner and hourly temperature checks of the afterburner when it is operating.
- (3) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall operate and maintain a continuous temperature sensor and alarm which measures the temperature of the exhaust gases within the afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring device shall be capable of accurately measuring the desired parameter. The

temperature monitor shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

- (2) The permittee shall collect and record the following information each day:
  - a. the occurrence of a low-temperature episode within the afterburner during the first hour of each operating cycle and what remedial action was taken to correct the problem;
- (3) The permittee shall perform an annual inspection of the afterburner which shall include, but is not limited to, the following check points:
  - a. refractory condition;
  - b. burner condition;
  - c. pressure seals condition;
  - d. shell condition;
  - e. auxiliary fuel piping train; and
  - f. interlocks, electrically operated valves, shutoff dampers, gauges, continuous recorders, and thermocouples.

The permittee shall record notes of the condition(s) for each of the above items and note any corrective actions which were taken to maintain the afterburner in peak operating condition. The recorded entry shall include the name of the person performing the inspection, date and time, identification of the afterburner, and signature of the inspector. It is recommended that the forms contained in Ohio EPA's Operation and Maintenance (O&M) Guidelines for Air Pollution Control equipment be used as an aid to compiling the information required for this Condition.

- (4) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (5) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in section d)(4) above:
  - a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

f) Testing Requirements

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

a. Emissions Limitation:

Visible PE from any stack shall not exceed 5% opacity, as a 6-minute average .

Applicable Compliance Method:

If required, compliance with the applicable stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

b. Emissions Limitations:

0.61 lb PE/hr and 2.7 TPY PE

Applicable Compliance Method:

Although the emissions unit is not classified as an incinerator, the method of operation is similar; therefore, the hourly emission limitation was established by multiplying the emissions limitation pursuant to OAC rule 3745-17-09(B) of 0.10 pound PE/100 pounds of material charged by the maximum charging rate of 609 pounds per hour as shown below.

$$[(0.10 \text{ lb PE}) \div (100 \text{ lbs})] \times (609 \text{ lbs/hr}) = 0.61 \text{ lb PE/hr}$$

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

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emission Limitations:

0.1 lb TOC/hr and 0.44 TPY TOC

Applicable Compliance Method:

The maximum heat input of 4.35 MMBtu/hr (total combined for furnace, primary burner and afterburner) multiplied by the natural gas AP-42 emission factor (Table 1.4-1) of 8 lbs TOC per MMCF of gas burned, and then divide by 1000 Btu per cubic feet of gas and multiply by 1.1 (safety factor).

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

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

d. Emission Limitations:

0.5 lb NOx/hr and 2.2 TPY NOx

Applicable Compliance Method:

The maximum heat input of 4.35 MMBtu/hr (total combined for furnace, primary burner and afterburner) multiplied by the natural gas AP-42 emission factor (Table



1.4-1) of 100 lbs NO<sub>x</sub> per MMCF of gas burned, and then divide by 1000 Btu per cubic feet of gas and multiply by 1.1 (safety factor).

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with Methods 1 – 4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

e. Emission Limitations:

0.44 lb CO/hr and 1.93 TPY CO

Applicable Compliance Method:

The maximum heat input of 4.35 MMBtu/hr (total combined for furnace, primary burner and afterburner) multiplied by the natural gas AP-42 emission factor (Table 1.4-1) of 84 lbs CO per MMCF of gas burned, and then divide by 1000 Btu per cubic feet of gas and multiply by 1.1 (safety factor).

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with Methods 1 – 4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

g) Miscellaneous Requirements

(1) None.

**8. P106, Mold Firing Furnace Property ID 7850**

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

Pacific Kiln natural gas fired mold firing furnace with thermal oxidizer

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>1.5 lb particulate matter less than 10 microns in size (PM10)/hr and 6.6 tons per year (TPY) PM10</p> <p>0.59 lb nitrogen oxides (NOx)/hr and 2.58 TPY NOx from the combustion of natural gas</p> <p>0.49 lb carbon monoxide (CO)/hr and 2.14 TPY CO from the combustion of natural gas</p> <p>Visible particulate emissions (PE) from any stack shall not exceed 5% opacity, as a 6-minute average.</p> <p>Total emissions from all Hazardous Air Pollutants (HAPs) combined shall not exceed 0.26 TPY. [See b)(2)a.] See b)(2)b., b)(2)c. and b)(2)d.</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)e.
c.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(B)	The emissions limitation specified by this rule is less stringent than the emissions limitation pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-18-06(E)	See b)(2)f.

(2) Additional Terms and Conditions

- a. Total HAPs consist of styrene, benzene, naphthalene, and toluene generated from the wax burn out and controlled by the afterburner.
- b. The Best Available Technology (BAT) requirements for this emission unit have been determined to be the use of an afterburner, the use of natural gas and compliance with the terms and conditions of this permit.
- c. The PM10, sulfur dioxide (SO<sub>2</sub>) and volatile organic compounds (VOC) emissions from the combustion of natural gas are negligible; therefore, no emission limitations for these pollutants will be included in this permit.
- d. The permittee has satisfied the Best Available Technology (BAT) requirements for pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.
- e. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3)(a) do not apply to the NO<sub>x</sub>, CO, PM10, SO<sub>2</sub> and VOC emissions since the potential to emit is less than 10 tons per year.

- f. This emission unit is exempt from OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the rated capacity of the emission unit is less than 1000 pounds per hour.

c) **Operational Restrictions**

- (1) This emissions unit shall be installed, operated, and maintained in accordance with the manufacturer's specifications. The permittee shall make no changes to the manufacturer's factory preset parameters for the emissions unit or physically modify the emissions unit in any way without prior verification from the manufacturer that the change(s) will not adversely affect air contaminant emissions from this unit.
- (2) The furnace gases shall exhaust to an afterburner. The afterburner shall be operated for a minimum of the first hour of each cycle whenever molds are being processed in the furnace. Each furnace shall satisfy one of the following requirements:
  - a. The furnace shall be equipped with a low temperature sensor and alarm system for the afterburner; or
  - b. A daily maintenance log shall include scheduled operating hours of the afterburner and hourly temperature checks of the afterburner when it is operating.
- (3) The permittee shall burn only natural gas in this emissions unit.

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

- (1) The permittee shall operate and maintain a continuous temperature sensor and alarm which measures the temperature of the exhaust gases within the afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
- (2) The permittee shall collect and record the following information each day:
  - a. the occurrence of a low-temperature episode within the afterburner during the first hour of each operating cycle and what remedial action was taken to correct the problem;
- (3) The permittee shall perform an annual inspection of the afterburner which shall include, but is not limited to, the following check points:
  - a. refractory condition;
  - b. burner condition;
  - c. pressure seals condition;
  - d. shell condition;

- e. auxiliary fuel piping train; and
- f. interlocks, electrically operated valves, shutoff dampers, gauges, continuous recorders, and thermocouples.

The permittee shall record notes of the condition(s) for each of the above items and note any corrective actions which were taken to maintain the afterburner in peak operating condition. The recorded entry shall include the name of the person performing the inspection, date and time, identification of the afterburner, and signature of the inspector. It is recommended that the forms contained in Ohio EPA's Operation and Maintenance (O&M) Guidelines for Air Pollution Control equipment be used as an aid to compiling the information required for this Condition.

- (4) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (5) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
  - (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in section d)(4) above:
    - a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit; and
    - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitations:  
1.5 lb PM10/hr and 6.6 TPY PM10  
  
Applicable Compliance Method:  
PE = 0.163835 lb PE / lb wax (provided in application)  
  
 $4.6 \text{ lb PE} / \text{batch} \times 1 \text{ batch} / 3 \text{ hrs} = 1.5 \text{ lb PE} / \text{hr}$
    - b. Emission Limitations:  
0.59 lb NOx/hr and 2.58 TPY NOx from the combustion of natural gas  
  
Applicable Compliance Method:  
  
The hourly emission limitation was established by multiplying the maximum input rate of 5882 scf/hr [6 mmBtu/hr / 1020 Btu/scf] by an emission factor of 100 lbs NOx/10<sup>6</sup>scf [AP-42, Table 1.4-2 (7/98)]. If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with Methods 1 – 4 and 7 of 40 CFR, Part 60, Appendix A.  
  
The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.
    - c. Emission Limitations:  
0.49 lb CO/hr and 2.14 TPY CO from the combustion of natural gas

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum input rate of 5882 scf/hr [6 mmBtu/hr / 1020 Btu/scf] by an emission factor of 84 lbs CO/10<sup>6</sup>scf [AP-42, Table 1.4-2 (7/98)]. If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with Methods 1 – 4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

d. Emissions Limitation:

Visible PE from any stack shall not exceed 5% opacity, as a 6-minute average .

Applicable Compliance Method:

If required, compliance with the applicable stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

e. Emissions Limitation:

Total emissions from all HAPs combined shall not exceed 0.26 TPY.

Applicable Compliance Method:

The total HAP emissions are based on a wax burnout analysis, provided by the permittee, which contained an emission concentration for each HAP as follows:

0.0165 lb styrene, 1.7 lb benzene, 1.7 lb naphthalene and 1.8 lb toluene (all per 100 lb of wax)

The maximum annual wax burnout is 81,760 lb wax from the permit application. The total annual HAP emissions were determined by multiplying each HAP emission concentration by the maximum annual wax burnout and adding the result of each product obtained. The sum of all products is then multiplied by (1.0-0.90) to account for the 90% control efficiency of the afterburner, and then multiplied by a margin of 1.25 to arrive at the 0.26 TPY HAPs limit.

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

g) Miscellaneous Requirements

(1) None.

**9. Emissions Unit Group -Acid Etch: P078,P079,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P078	Acid etch line with fume scrubber; FS-1
P079	Acid Etch Line with fume scrubber; FS-2

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.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
a.	OAC rule 3745-31-05(A)(3)	Hydrogen chloride (HCl) emissions shall not exceed 0.1 lb/hr and 0.44 ton per year (TPY)  See b)(2)a.
b.	OAC rule 3745-17-07(A)	See b)(2)b.
c.	OAC rule 3745-17-11(B)	See b)(2)c.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements for these emission units has been determined to be that all acid fumes generated by these sources shall be captured and vented to a fume scrubber with a minimum control efficiency of 90%, compliance with OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B) and compliance with the terms and conditions of this permit.

- b. These emission units are exempt from the visible emission limitation specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.
  - c. The uncontrolled mass rate of particulate emissions from these emission units is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, the process weight rate of these emission units cannot be ascertained. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(b)(i), Table I of OAC rule 3745-17-11 does not apply to these emission units.
- c) Operational Restrictions
- (1) None.
- d) Monitoring and/or Recordkeeping Requirements
- (1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable range for the pressure drop across the scrubbers [FS1 scrubber for P078 and FS2 scrubber for P079], that shall be maintained in order to demonstrate compliance, shall be between 0 to 2.5 pounds per square inch (gauge) for the FS1 scrubber and 0 to 5.5 pounds per square inch (gauge) for the FS2 scrubber.
  - (2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than **45** gallons per minute for the FS1 scrubber and not less than **76** gallons per minute for the FS2 scrubber.
  - (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubbers (in pounds per square inch, gauge), the scrubber liquid flow rates (in gallons per minute) during operation of these emissions units, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubbers and scrubber liquid flow rates on weekly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop and/or the scrubber liquid flow rates deviates from the range recommended by the manufacturer, 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 recommended by the manufacturer, 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 / scrubber liquid flow 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 ranges and/or limits for the pressure drops and scrubber liquid flow rates are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable HCl emission rates for these emissions units. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the wet scrubber during the 12-month reporting period for these emissions units:

- a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubbers or the scrubber liquid flow rates were outside of the appropriate range or exceeded the applicable limit contained in this permit;
  - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
  - c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the pressure drop, liquid flow rate, and/or scrubber liquid pH into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and
  - e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitations:

HCl emissions shall not exceed 0.1 lb/hr and 0.44 TPY

Applicable Compliance Method:

The hourly HCl emission limitation was determined from stack tests performed on 3-9-93 and 4-30-93 and emission calculations provided by facility. If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with Methods 1-4 and 26 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.
- g) Miscellaneous Requirements
- (1) None.

**10. Emissions Unit Group -Cutoff-Grinding: P016,P018,P019,P029,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P016	Blaster & knockout w/hydrostatic precipitator; Company ID jet wheel blast #5993, Shell knockout.
P018	Cut-off saws w/hydrostatic precipitator; 5 tabor cutoff saws #37744, #5381, #5382, #25891, #31149 wallace trim saw #44937
P019	Grinding & cutoffs w/fabric filter; Centro-Maskin Grinder #5835, Tabor Cutoffs #25890 & #33204, Ryman end grinder #44920, Besley grinder #2785, Fox cutoff #31132, Metro Hand Grinder.
P029	Polishing & grinding w/scrubber (hydrostatic precipitator); Dotco Air Hand Grinders, Universal Belt Grinders, Hammond grinder, Slack belt grinders, Dyna file grinders, Hand blast cabinets

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.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
a.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stacks serving emissions units P016, P018, P019 and P029 shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	P016: 2.53 lbs PE/hr P018: 0.61 lbs PE/hr P019: 1.53 lbs PE/hr P029: 0.20 lb PE/hr

- (2) Additional Terms and Conditions
  - a. None.
- c) Operational Restrictions
  - (1) The emissions from emissions units P016, P018 and P029 shall be vented to a hydrostatic precipitator at all times the emissions units are in operation.
  - (2) The emissions from emissions unit P019 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 perform daily checks, when these emissions units are in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving emissions units P016, P018, P019 and P029. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the location and color of the emissions;
    - b. whether the emissions are representative of normal operations;
    - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
    - d. the total duration of any visible emissions incident; and
    - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.
  - (2) Notwithstanding the frequency of the monitoring and record keeping requirements specified in section d)(1), the permittee may reduce the visual observations from daily readings to weekly readings if the following are met:
    - a. for 1 full quarter the facility's visual observations indicate no visible emissions; and
    - b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section d)(1).

The permittee shall revert to daily readings if any visible emissions are observed.

- (3) The permittee shall document each day whether or not the hydrostatic precipitator for P016, P018 and P029 was in service when these emission units were in operation.
- (4) The permittee shall document each day whether or not the baghouse for P019 was in service when this emission unit was in operation.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in section d)(1) above:
  - a. all days during which any visible particulate emissions were observed from the stacks serving emissions units P016, P018, P019 and P029;
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack.

f) Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from the stacks serving emissions units P016, P018, P019 and P029 shall not exceed 20% opacity as a 6-minute average, except as specified by rule.

Applicable Compliance Method

If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitations:

PE shall not exceed: (see table below)



EU ID	PE limit (lb/hr)
P016	2.53
P018	0.61
P019	1.53
P029	0.20

Applicable Compliance Method:

Using equation  $E = 4.10 (P)^{0.67}$  and Process weight rates (PWR) supplied by facility:

For P016 PWR = 0.49 TPH, For P018 PWR = 0.058 TPH,

For P019 PWR = 0.229 TPH, For P029 PWR = 0.108 TPH

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

g) Miscellaneous Requirements

(1) None.