



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

2/24/2016

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: P0117783  
Permit Type: Initial Installation  
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**
- **What should you do if you notice a spill or environmental emergency?**

**How to appeal this permit**

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

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

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

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

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

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

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

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

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

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

If you have any questions regarding your permit, please contact 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:	P0117783
Permit Type:	Initial Installation
Issued:	2/24/2016
Effective:	2/24/2016
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:** P0117783  
**Facility ID:** 1576000096  
**Effective Date:** 2/24/2016

## Authorization

Facility ID: 1576000096  
Application Number(s): A0051731  
Permit Number: P0117783  
Permit Description: New installation of a tumbleblast shot blaster & knockout controlled with hydrostatic precipitator (rotoclone) that exhausts inside the building  
Permit Type: Initial Installation  
Permit Fee: \$1,000.00  
Issue Date: 2/24/2016  
Effective Date: 2/24/2016  
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.

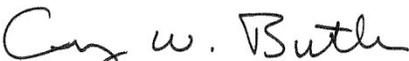
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0117783  
**Facility ID:** 1576000096  
**Effective Date:** 2/24/2016

## Authorization (continued)

Permit Number: P0117783

Permit Description: New installation of a tumbleblast shot blaster & knockout controlled with hydrostatic precipitator (rotoclone) that exhausts inside the building

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

<b>Emissions Unit ID:</b>	<b>P081</b>
Company Equipment ID:	Jet Wheel Blast #7986, Shell knockout
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0117783  
**Facility ID:** 1576000096  
**Effective Date:** 2/24/2016

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0117783  
**Facility ID:** 1576000096  
**Effective Date:** 2/24/2016

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



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - 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:** P0117783  
**Facility ID:** 1576000096  
**Effective Date:** 2/24/2016

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



**1. P081, Jet Wheel Blast #7986, Shell knockout**

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

Wheelabrator tumbleblast shot blaster & knockout controlled with hydrostatic precipitator (rotoclone) that exhausts inside the building; Company ID: 7986 jet wheel blast, Shell knockout.

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. b)(1)c.

(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 6/30/08  [Best Available Technology (BAT) requirements]	Install a rotoclone / control device for the control of particulate emissions (PE/PM <sub>10</sub> ) from this emissions unit that is designed to have an overall control efficiency of 96%  See b)(2)a., b)(2)b., c)(1), c)(2) and c)(3)
b.	OAC rule 3745-31-05(F)  [Voluntary restriction proposed by permittee]	Install and operate air pollution control equipment (control device) for the control of particulate emissions (PE/PM <sub>10</sub> ) from this emissions unit that is designed to have an overall control efficiency of 96% and 1.45 tons PE/PM <sub>10</sub> per year.  See c)(1), c)(2) and c)(3)
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[Less than 10 ton/yr BAT exemption]	PM <sub>10</sub> emissions from this air contaminant source since the potential to emit is less than 10 tons/year taking into account the voluntary restriction established pursuant to OAC rule 3745-31-05(F).  See b)(2)c.
d.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a six-minute average, accept as provided by rule.
e.	OAC rule 3745-17-11	Particulate Emissions (PE) shall not exceed 2.9 lbs PE/hr  This emission limitation is less stringent than the limitation established pursuant to OAC 3745-31-05(F).

(2) Additional Terms and Conditions

- a. All particulate emissions (PE) from the rotoclone / control device are assumed to be less than 10 microns in diameter and are designated as PM<sub>10</sub>.
- b. The Best Available Technology (BAT) requirements in b)(1)a. above apply until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the State Implementation Plan (SIP) for Ohio.
- c. The exemptions described in b)(1)b. above apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

- (1) The emissions from this emissions unit shall be vented to the rotoclone / control device at all times when the emissions unit is in operation.
- (2) This emission unit cannot be in operation at the same time while emissions unit P016 (Blaster & knockout w/hydrostatic precipitator; Company ID jet wheel blast #5993) is operating, which is controlled by the same rotoclone / control device.
- (3) The permittee shall maintain the rotoclone / control device in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s). In the event the rotoclone / control device is not operating in accordance with the manufacturer's recommendations, instructions, or operating manual, the control device shall be expeditiously repaired or otherwise returned to these documented operating conditions.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and, when the weather conditions allow, for any visible particulate emissions from the exhaust 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 from any points of capture and/or the stack, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

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. the daily checks show emissions that are representative of normal operation for one (1) operating quarter.

If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to daily until such time as there has been one (1) operating quarter of normal visible emissions.

- (3) The permittee shall document each day when this emission unit is in operation at the same time as P016 is in operation.
- (4) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the rotoclone / control device. These documents shall be maintained at the facility.

- (5) The permittee shall conduct periodic inspections of the rotoclone / control device to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency.

The permittee shall document each inspection (periodic and annual) of the rotoclone / control device and shall maintain the following information:

- a. the date of the inspection;
  - b. a description of each/any problem identified and the date it was corrected;
  - c. a description of any maintenance and repairs performed; and
  - d. the name of person who performed the inspection.
- (6) The permittee shall maintain records that document any time periods when the rotoclone / control device was not in service when the emissions unit(s) was/were in operation, as well as, a record of all operations during which the rotoclone / control device was not operated according to the manufacturer's recommendations.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Canton City Health Department, Air Pollution Control Division by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in term numbers d)(1) and d)(3) above:

- a. all days during which any visible particulate emissions were observed from the stack serving this emission unit;
- b. any corrective actions taken to minimize or eliminate the visible particulate emissions;
- c. each period of time (start time and date, and end time and date) when this emission unit was in operation at the same time as P016 was in operation; and
- d. 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 rotoclone / control device.

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:

Install a rotoclone / control device for the control of particulate emissions (PE) from this emissions unit that is designed to have an overall control efficiency of 96%

Applicable Compliance Method:

The overall efficiency was calculated by multiplying the capture efficiency of 99% (supplied by facility calculations in permit application) by the design control efficiency of 97% (provided in manufacturer's specification), as shown below:

$$0.99 * 0.97 = 0.96 \rightarrow 96\%$$

The manufacturer specification includes the rotoclone / control device should be operated at a minimum of 4800 cubic feet per minute (CFM) air flow. Manufacturer's data sheet is included as a permit attachment.

EU's P016 and P081 are connected to the same air pollution control device (rotoclone / control device) with a maximum rating of 8416 CFM air flow. The EU P016 requires 3100 CFM and P081 requires 5600 CFM to be controlled properly, which exceeds the maximum air flow for the device. Therefore, only one of these EU's can operate at a time.

Since the rotoclone / control device is designed to achieve this control efficiency, compliance is assumed as long as the rotoclone / control device is maintained in accordance with manufacturer recommendations as required by this permit.

b. Emission Limitation:

Install and operate air pollution control equipment (control device) for the control of particulate emissions (PE/PM<sub>10</sub>) from this emissions unit that is designed to have an overall control efficiency of 96% and 1.45 tons PE/PM<sub>10</sub> per year.

Applicable Compliance Method:

The overall control efficiency was established according to f)(1)a. above.

The annual emission limitation was established based on the maximum controlled potential to emit and the overall control efficiency limit, per the following calculation and information supplied within the permit application:

$$E_U = (\text{Maximum abrasive used per hour}) \times (\text{emission factor})$$

$$E_L = E_U \times (1-CE) \times (\text{maximum hours per year}) \times (\text{lbs to tons conversion})$$

Where,

$E_U$  = Uncontrolled emissions, which also equals the uncontrolled mass rate of emissions

$E_L$  = Emissions limit, which is also the controlled emissions

CE = overall control efficiency, expressed as a decimal fraction, which equals 96% or 0.96.

Maximum abrasive used per hour = 3,000 pound (lbs) of abrasive used per batch multiplied by maximum 4 batches per hour = 12,000 lbs/hr. This converts to tons per the following: 12,000 lbs/hr x (1 ton / 2000lbs) = 6 tons / hr

Emission factor = 0.69 lbs of PE per 1,000 lbs of abrasive from AP-42 Table 13.2.6-1

$$E_U = (12,000 \text{ lbs/hr}) \times (0.69 \text{ lbs of PE} \div 1,000 \text{ lbs}) = 8.28 \text{ lbs PE/hr}$$

$$E_L = 8.28 \text{ lbs/hr} \times (1-0.96) \times (8760) \times (1 / 2000) = 1.45 \text{ tons PE/year}$$

Since the rotoclone / control device is designed to achieve this control efficiency, compliance is assumed as long as the rotoclone / control device is maintained in accordance with manufacturer recommendations as required by this permit.

c. Emission Limitation:

Particulate emissions (PE) shall not exceed 2.9 pounds per hour

Applicable Compliance Method:

Using equation  $E = 4.10 \times (P)^{0.67}$  from Table I and Process weight rate (P),

$P = (6 \text{ tons/hr of abrasive material used from f)(1)b. above}) \times 0.1$  (portion which may become particulate, which was estimated to be 10% by permit writer) = 0.6 tons/hr

The emission limitation was calculated as follows:

$$E = 4.10 \times (0.6)^{0.67} = 2.9 \text{ lb PE /hr}$$

Table I was used in lieu of Figure II, since the uncontrolled mass rate of emission from f)(1)a. above was calculated to be 8.28 lbs/hr < 10 lbs/hr; therefore, Figure II is not able to be used.

If required, compliance with the particulate emissions limit of 2.9 pounds per hour shall be determined in accordance with U.S. EPA Methods 1 through 5 of 40 CFR Part 60 Appendix A.



**Final Permit-to-Install and Operate**  
PCC AIRFOILS, LLC.  
**Permit Number:** P0117783  
**Facility ID:** 1576000096  
**Effective Date:** 2/24/2016

The annual emissions would be equal to the hourly limit x 8760 x (1/2000), which is more than the 1.45 TPY limit pursuant to OAC 3745-31-05(F), as shown below.

$$= 2.9 \text{ lb/hr} \times 8760 \text{ hr} \times (T / 2000 \text{ lb}) = 12.7 \text{ TPY} > 1.45 \text{ TPY}$$

g) Miscellaneous Requirements

(1) None.