State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
LAKE COUNTY

Street Address: 122 S. Front Street
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address: Lazarus Gov. Center P.O. Box 1049

Application No: 02-14378

DATE: 1/23/2001

PCC Airfoils Inc - Mentor
Jim Lines
8607 Tyler Blvd
Mentor, OH 44060

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA **NEDO**

FINAL PERMIT TO INSTALL 02-14378

Application Number:	02-14378
APS Premise Number:	0243081072
Permit Fee:	**$400**
Name of Facility:	PCC Airfoils Inc - Mentor
Person to Contact:	Jim Lines
Address:	8607 Tyler Blvd Mentor, OH 44060

Location of proposed air contaminant source(s) [emissions unit(s)]:
8607 Tyler Blvd
Mentor, **Ohio**

Description of proposed emissions unit(s):
HMC Car Bottom Furnace with Incinerator.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities prove to be inadequate or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PM	0.59
VOC	0.28
NOx	2.6
CO	2.2

Emissions Unit ID: **P023**

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements
P023 - HMC Car Bottom Furnace (6.0 mm BTU/hr. natural gas fired furnace) with 3.0 mm BTU/hr. afterburner.	OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-10 (B)(1)
	OAC rule 3745-17-07 (A)
	OAC rule 3745-17-11(B)(1)
	OAC rule 3745-21-07 (G)(1)
Products of natural gas combustion.	OAC rule 3745-31-05 (A)(3)

Applicable Emissions Limitations/Control Measures	
Visible emissions from this emissions unit shall not exceed 5 percent opacity as a six-minute average.	.12 pound per hour.
Particulate Matter: 0.09 pound per hour; 0.39 ton per year.	
Volatile Organic Compound emissions: 0.033 pound per hour; 0.14 ton per year.	
Less stringent than the limits of OAC rule 3745-31-05 (A)(3).	
Less stringent than the limits of OAC rule 3745-31-05 (A)(3).	
Less stringent than the limits of OAC rule 3745-31-05 (A)(3).	
Volatile Organic Compound emissions from natural gas combustion: 0.032 pound per hour; 0.14 ton per year.	
Nitrogen Oxide emissions from natural gas combustion: 0.59 pound per hour; 2.6 ton per year.	
Carbon Monoxide emissions from natural gas combustion: 0.49 pound per hour; 2.2 ton per year.	
Particulate Matter from natural gas combustion: 0.020 pound per million BTU of actual heat input;	

2. Additional Terms and Conditions

2.a None

B. Operational Restrictions

1. The permittee shall burn only natural gas and/or number two fuel oil in this emissions unit.

2. The furnace shall not be in operation until the afterburner temperature reaches 1400 degrees Fahrenheit.

3. The permittee shall maintain a minimum temperature of 1400 degrees Fahrenheit in the afterburner of source P023.

4. The afterburner shall be operated and maintained in accordance with the manufacturer's specifications.

C. Monitoring and/or Record keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas and/or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall install, operate, and maintain a continuous temperature recorder to record the temperature in the afterburner. The emission unit shall have a continuous display at the operating controls and an audible alarm to indicate if the temperature is less than 1400 degrees Fahrenheit.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports for each day when:

   a. a fuel other than natural gas and/or number two fuel oil is burned;

   b. the furnace is operated prior to the afterburner reaching a temperature of 1400 degrees Fahrenheit;

   c. the afterburner temperature does not meet the requirements identified above.

E. Testing Requirements

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      Visible particulate emissions from the stack associated with this emissions unit shall not exceed five percent opacity as a six-minute average.

      Applicable Compliance Method:

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

   b. Emission Limitation:

      Particulate emissions from the stack associated with this emissions unit shall not exceed 0.09 pound per hour plus 0.020 pound per million BTU of actual heat input as a result of natural gas combustion.

      Applicable Compliance Method:

      Compliance with the 0.09 pound per hour emission limit shall be determined by multiplying the production rate in pounds of wax per cycle by 14.38% (decomposition of wax into particulate matter emissions) and by 1% (emissions not controlled by the afterburner).

      Compliance with the 0.020 pound per million BTU of actual heat input emission limit (as a result of natural gas combustion) shall be determined by multiplying the furnace rating (mmBTU/hour) by the emission factor of 7.6E+00 (lb/mmscf), taken from AP-42, Fifth Edition, Volume 1, Table 1.4-2, and dividing by 1,020 (BTU/scf).

      If required, the permittee shall demonstrate compliance with the hourly emission rate in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

   c. Emission Limitation:

      Particulate emissions from the stack associated with this emissions unit shall not exceed 0.10 ton per year plus 0.020 pound per million BTU of actual heat input as a result of

natural gas combustion.

Applicable Compliance Method:

Compliance shall be determined by multiplying the hourly particulate matter emission rate (lb/hr) by 6 (cycles/day) and by 365 (days/year) and dividing by 2000 (lb/ton).

d. Emission Limitation:

Volatile organic compound emissions from the stack associated with this emissions unit shall not exceed the 0.033 pound per hour limit plus the 0.032 pound per hour limit from natural gas combustion.

Applicable Compliance Method:

Compliance with the 0.033 pound per hour emission limit shall be determined by multiplying the production rate in pounds of wax per cycle by 5.4% (decomposition of wax into benzene, naphthalene and toluene) and by 1% (emissions not controlled by the afterburner).

Compliance with the 0.032 pound per hour emission limit (as a result of natural gas combustion) shall be determined by multiplying the furnace rating (mmBTU/hour) by the emission factor of 5.5E+00 (lb/mmscf), taken from AP-42, Fifth Edition, Volume 1, Table 1.4-2, and dividing by 1,020 (BTU/scf).

If required, pursuant to Ohio Administrative Code 3745-15-04, the permittee shall demonstrate compliance with the hourly organic compound emissions limit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, NSPS, Appendix A, Method 18 or any other method approved by Ohio EPA.

e. Emission Limitation:

Volatile organic compound emissions from the stack associated with this emissions unit shall not exceed 0.036 ton per year plus 0.14 ton per year as a result of natural gas combustion.

Applicable Compliance Method:

Compliance shall be determined by multiplying the hourly organic compound emission rate (lb/hour) by 6 (cycles/day) and by 365 (days/year) and dividing by 2000 (lb/ton).

f. Emission Limitation:

Nitrogen oxide emissions from the stack associated with natural gas combustion shall not exceed 0.59 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the furnace rating (6 mmBTU/hour) by the emission factor of 1.0E+02 (lb/mmscf), taken from AP-42, Fifth Edition, Volume 1, Table 1.4-1, and dividing by 1,020 (BTU/scf).

g. Emission Limitation:

Nitrogen oxide emissions from the stack associated with natural gas combustion shall not exceed 2.6 ton per year.

Applicable Compliance Method:

Compliance shall be determined by multiplying the hourly nitrogen oxide emission rate (lb/hour) by 8760 (hours/year) and dividing by 2000 (lb/ton).

h. Emission Limitation:

Carbon monoxide emissions from the stack associated with natural gas combustion shall not exceed 0.49 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the furnace rating (6 mmBTU/hour) by the emission factor of 8.4E+01 (lb/mmscf), taken from AP-42, Fifth Edition, Volume 1, Table 1.4-1, and dividing by 1,020 (BTU/scf).

i. Emission Limitation:

Carbon monoxide emissions from the stack associated with natural gas combustion shall not exceed 2.2 ton per year.

Applicable Compliance Method:

Compliance shall be determined by multiplying the hourly carbon monoxide emission rate (lb/hour) by 8760 (hours/year) and dividing by 2000 (lb/ton).

F. Miscellaneous Requirements

Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

NEW SOURCE REVIEW FORM B

PTI Number: 02-14378 Facility ID: 0243081072

FACILITY NAME PCC Airfoils Inc - Mentor

FACILITY DESCRIPTION Manufacturer of precision turbine airfoils for aircraft and power generation. CITY/TWP Mentor

SIC CODE 3724 SCC CODE 1020060 EMISSIONS UNIT ID P023

EMISSIONS UNIT DESCRIPTION HMC Car Bottom Furnace (6.0 mm BTU/hr. natural gas fired furnace) with 3.0 mm BTU/hr. afterburner.

DATE INSTALLED

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM_{10}	attainment	0.095	0.26	0.14	0.59
Sulfur Dioxide					
Organic Compounds	attainment	0.049	0.16	0.065	0.28
Nitrogen Oxides	attainment	0.59	2.6	0.59	2.6
Carbon Monoxide	attainment	0.49	2.2	0.49	2.2
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination: furnace fueled only with natural gas; furnace not operated until afterburner temperature reaches 1400 F; afterburner minimum temperature maintained at 1400 F; afterburner operated and maintained in accordance with manufacturer's specifications.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES X NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SOURCE REVIEW FORM B

PTI Number: 02-14378 Facility ID: 0243081072

FACILITY NAME PCC Airfoils Inc - Mentor

FACILITY DESCRIPTION Manufacturer of precision turbine airfoils for aircraft and power generation. CITY/TWP Mentor

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit hard copy items to **Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

Please fill out the following. If the checkbox does not work, replace it with an 'X'	Electronic	**Additional information** File Name Convention (your PTI # plus this letter)	Hard Copy	None
Calculations (required)	☐	0000000**c**.wpd	☒	
Modeling form/results	☐	0000000**s**.wpd	☐	☐
PTI Application (complete or partial)*	☒	0000000**a**.wpd	☐	☐
BAT Study	☐	0000000**b.**wpd	☐	☐
Other/misc.	☐	0000000**t**.wpd	☐	☐

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

NONE

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

☐ **Synthetic Minor Determination and/or** ☐ **Netting Determination**

Permit To Install **ENTER PTI NUMBER HERE**

A. Source Description

B. Facility Emissions and Attainment Status

C. Source Emissions

D. Conclusion

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

SUMMARY (for informational purposes only)

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant **Tons Per Year**

NEW SOURCE REVIEW FORM B

PTI Number: 02-14378 Facility ID: 0243081072

FACILITY NAME PCC Airfoils Inc - Mentor

FACILITY DESCRIPTION	Manufacturer of precision turbine airfoils for aircraft and power generation.	CITY/TWP	Mentor

PM	0.59
VOC	0.28
NOx	2.6
CO	2.2