



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
CUYAHOGA COUNTY**

CERTIFIED MAIL

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: 13-03991

DATE: 4/17/2003

Ohio Aluminum Industries, Incorporated
James Hubman
4840 Warner Road
Garfield Heights, OH 44125

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,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA

CBAPC



**Permit To Install
Terms and Conditions**

**Issue Date: 4/17/2003
Effective Date: 4/17/2003**

FINAL PERMIT TO INSTALL 13-03991

Application Number: 13-03991
APS Premise Number: 1318226416
Permit Fee: **\$400**
Name of Facility: Ohio Aluminum Industries, Incorporated
Person to Contact: James Hubman
Address: 4840 Warner Road
Garfield Heights, OH 44125

Location of proposed air contaminant source(s) [emissions unit(s)]:
**4840 Warner Road
Garfield Heights, Ohio**

Description of proposed emissions unit(s):
Sand reclamation unit -- P004.

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

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping 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 record keeping 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 cannot meet the requirements of this permit 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 cannot meet the requirements of this permit 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 Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

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 ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

Ohio Aluminum Industries, Incorporated
 PTI Application: 13-03991
 Issued: 4/17/2003

Facility ID: 1318226416

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**

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	11.30
CO	7.14
SO ₂	11.43
OC	0.45
NO _x	0.07

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P004 - Gundgeon Bros. Ltd. Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit (foundry sand reclaim) controlled by a fabric filter baghouse.	OAC rule 3745-17-07 (B)(1)
	OAC rule 3745-17-08 (B)
	OAC rule 3745-17-07 (A)(1)
	OAC rule 3745-17-11(B)
	OAC rule 3745-21-07 (G)(2)

Applicable Emissions
Limitations/Control Measures

0.102 lb/hr and 0.45 TPY of Organic Compounds (OC).

11.30 TPY of particulate emissions (PE)

1.63 lbs/hr and 7.14 TPY of Carbon Monoxide Compounds (CO).

2.61 lbs/hr and 11.43 TPY of SO₂ emissions

0.02 lb/hr and 0.07 TPY of NO_x emissions

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), 3745-17-07(B)(1), and OAC rule 3745-17-08(B)

See A.2.a.

See B.1-4.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)

Visible PE from any fugitive dust source shall not exceed 20% opacity, as a three-minute average, except as specified by rule.

The control measures specified by this rule are equivalent to the control measures established pursuant to OAC Rule 3745-31-05(A)(3).

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

See Section A.2.b.

2. Additional Terms and Conditions

- 2.a** The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible particulate emissions of fugitive dust. At a minimum, the permittee's employment of best available control measures shall consist of localized hooding vented to a baghouse to capture the fugitive particulate emissions.
- 2.b** The uncontrolled mass rate of particulate emissions from this emission unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. Based on Table I of OAC rule 3745-17-11, the allowable PE limitation is 2.58 pounds per hour for this emissions unit.

B. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 2.0 to 6.0 inches of water while this emissions unit is in operation.
2. The operating temperature for the hot side of the Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit shall be maintained within the range of 500°F to 1300° F and the cool side shall be maintained within the range of 125° F to 200° F while this emissions unit is in operation.
3. All particulate emissions captured from this emissions unit shall be vented to the fabric filter.
4. The permittee shall only fire natural gas as fuel in this emissions unit.

C. Monitoring and/or Record keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.
2. 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

Emissions Unit ID: **P004**

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 emission incident; and
 - e. Any corrective actions taken to eliminate the visible emissions.
3. The permittee shall perform weekly checks when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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 emission incident; and
 - e. Any corrective actions taken to eliminate the visible emissions.
4. The permittee shall collect and record the following information each day when operating this emissions unit:
- a. The operating temperature of the Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit for both the hot side and cool side temperatures.

D. Reporting Requirements

1. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any daily record that identifies all the periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above. This notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 45 days after the exceedance occurs.
2. The permittee shall submit to the Cleveland DAQ a semiannual written report which (a) identifies all days during which any visible PE from any stack serving this emissions unit, and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted January 31 and July 31 of each year and shall cover the previous 6-month calendar period.
3. The permittee shall submit to the Cleveland DAQ a semiannual written report which (a) identifies all days during which any visible fugitive PE from this emissions unit, and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted January 31 and July 31 of each year and shall cover the previous 6-month calendar period.
4. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any daily record that identifies all the periods of time during which the operating temperatures, for both the hot side and cool side, of the Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit did not comply with the allowable range specified above. This notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 45 days after the exceedance occurs.

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
2.58 lbs/hr of PE

Applicable Compliance Method:

Compliance with the above emission limitation shall be determined by using the following equation using the maximum hourly process weight rate:

$$[\text{EF (lb PE/ ton sand processed)}] * [0.5 \text{ ton of processed sand / hour}] = \text{PE emissions (lb PE/hour)}$$

where: EF = 0.54 lbs PE / ton sand processed (with controls)

(Table 12.13-2; AP-42: Chapter 12.13 Steel Foundries;
<http://www.epa.gov/ttn/chief/ap42/ch12/final/c12s13.pdf>).

If required, the permittee shall demonstrate compliance with the hourly allowable PE limitation above in accordance with the methods specified in OAC 3745-17-03(B)(10).

- b. Emission Limitation:
11.30 TPY of PE

Applicable Compliance Method:

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

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

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

- d. Emission Limitation:
0.102 lb/hr of OC

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly allowable OC emission limitation above in accordance with methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

- e. Emission Limitation:
0.45 TPY of OC

Applicable Compliance Method:

Emissions Unit ID: P004

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

- f. Emission Limitation:
1.63 lbs/hour of CO

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly allowable CO emission limitation above in accordance with method 10, as appropriate, of 40 CFR, Part 60, Appendix A.

- g. Emission Limitation:
7.14 TPY of CO

Applicable Compliance Method:

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

- h. Emission Limitation:
2.61 lbs/hour of SO₂

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly allowable SO₂ emission limitation above in accordance with method 6, as appropriate, of 40 CFR, Part 60, Appendix A.

- i. Emission Limitation:
11.43 TPY of SO₂

Applicable Compliance Method:

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

maintained with the pounds per hour limitation..

- j. Emission Limitation:
Visible fugitive particulate emissions shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Reference Method 9.

- k. Emission Limitation:
0.02 lb/hr of NO_x

Applicable Compliance Method:

Compliance with the above emission limitation shall be determined by using the following equation using the maximum hourly process weight rate:

$$[\text{EF (lb NO}_x\text{/ ton sand processed)}] * [0.5 \text{ ton of processed sand / hour}] = \text{NO}_x \text{ emissions (lb NO}_x\text{/hour)}$$

where: EF = 0.031 lbs NO_x / ton sand processed
(Table 11.19.1-1; AP-42: Chapter 11.19.1 Sand and Gravel Processing;
<http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s19-1.pdf>).

If required, the permittee shall demonstrate compliance with the hourly allowable NO_x emission limitation above in accordance with method 7, as appropriate, of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval.

- l. Emission Limitation:
0.07 TPY of NO_x

Applicable Compliance Method:

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

F. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 13-03991

Facility ID: 1318226416

FACILITY NAME Ohio Aluminum Industries

FACILITY DESCRIPTION Aluminum Foundry and core

CITY/TWP Garfield Heights

Emissions Unit ID: **P004**SIC CODE 3365SCC CODE 3-04-007-07EMISSIONS UNIT ID P004EMISSIONS UNIT DESCRIPTION Gudgeon Bros. Ltd. Thermofire TF1000 Fluidized Bed Thermal Reclamation Unit
(foundry sand reclaim)DATE INSTALLED 01/01/1995

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	Attainment	0.27 lbs/hour	1.18 TPY	2.58 lbs/hour	11.30 TPY
PM ₁₀					
Sulfur Dioxide	Attainment	10.44 lbs/day	1.31 TPY	2.61 lbs/hour	11.43 TPY
Organic Compounds	Attainment	0.408 lbs/day	0.05 TPY	0.102 lbs/hour	0.45 TPY
Nitrogen Oxides	Attainment	0.372 lbs/day	0.07 TPY	0.02 lbs/hour	0.07 TPY
Carbon Monoxide	Attainment	6.52 lbs/day	0.82 TPY	1.63 lbs/hour	7.14 TPY
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?

Use of Baghouse for control of particulate emissions and understanding of process and knowledge of control equipment regarding this process. PE was limited by rule, 3745-17-11(B).

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

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 NOIDENTIFY THE AIR CONTAMINANTS: All under 1 tpy.

Emissions Unit ID: **P004**