



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 08-04896**

**Fac ID: 0857731276**

**DATE: 12/20/2007**

Yoder Industries  
Doug Lenz  
2520 Needmore Rd.  
Dayton, OH 45414-4204

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 of the Director is final 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 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  
309 South Fourth Street, Room 222  
Columbus, OH 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

RAPCA

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**Permit To Install  
Terms and Conditions**

**Issue Date: 12/20/2007  
Effective Date: 12/20/2007**

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**FINAL PERMIT TO INSTALL 08-04896**

Application Number: 08-04896  
Facility ID: 0857731276  
Permit Fee: **\$1000**  
Name of Facility: Yoder Industries  
Person to Contact: Doug Lenz  
Address: 2520 Needmore Rd.  
Dayton, OH 45414-4204

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**2520 Needmore Re.  
Dayton, Ohio**

Description of proposed emissions unit(s):  
**Aluminum melting furnace.**

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

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Chris Korleski  
Director

Yoder Industries  
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## 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 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 (i.e., postmarked) quarterly 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

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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)**

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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.

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**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.

**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>
Particulate	10.83
NOx	2.96
SO <sub>2</sub>	0.018
CO	2.49
VOC	0.16

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**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 - (P001) - Natural Gas-fired Aluminum Reverberatory Furnace No. 1**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) from this emissions unit shall not exceed 2.5 lbs/hr and 10.83 tons per year (TPY).  Visible particulate emissions from any stack shall not exceed 5 percent opacity as a six-minute average.
OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	Carbon monoxide (CO) emissions from this emissions unit shall not exceed 0.57 lb/hr.  See Section A.2.b below.
OAC rule 3745-31-05(A)(3)(b)	See Section A.2.c below.

**2. Additional Terms and Conditions**

- 2.a The PE and CO emissions limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop additional monitoring, record keeping and reporting requirements to ensure compliance with these emissions limitations.
- 2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the emissions limitation established pursuant to OAC rule 3745-21-08(B) in this Permit to Install.

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On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.c** The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC emissions from this air contaminant source since the potential to emit for NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC is less than ten tons per year.

**B. Operational Restrictions**

1. The permittee shall process only clean charge in this emissions unit. Per 40 CFR 63.1503, clean charge means furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; alloying elements; aluminum scrap known by the owner or operator to be entirely free of paints, coatings, and lubricants; uncoated/unpainted aluminum chips that have been thermally dried or treated by a centrifugal cleaner; aluminum scrap dried at 343 °C (650 °F) or higher; aluminum scrap delacquered/decoated at 482 °C (900 °F) or higher, and runaround scrap.

**C. 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 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 emission incident; and

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- e. any corrective actions taken to eliminate the visible emissions.
2. For each day during which the permittee processes a metal other than clean charge aluminum, as defined above and in 40 CFR 63.1503, the permittee shall maintain a record of the type and quantity of metal processed in this emissions unit.

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#### D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous six-month periods.
2. The permittee shall submit deviation (excursion) reports that identify each day when a metal other than clean charge aluminum, as defined above and in 40 CFR 63.1503, was processed in this emissions unit. These reports shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the deviation occurs.

#### 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. Emissions Limitation  
PE from this emissions unit shall not exceed 2.5 lbs/hr.

##### Applicable Compliance Method

Compliance shall be determined using AP-42 Table 1.4-2 (July 1998) for the combustion emissions, Table 11-2 of "Air Quality Permits: A Handbook for Regulators and Industry" (STAPPA-ALAPCO, 5/30/91) for aluminum melting emissions and inputs representing the potential to emit, as follows:

Emissions = Combustion Emissions + Aluminum Melting Emissions

Combustion Emissions = (maximum furnace heat input) \* (emission factor) / (fuel heat content)

Combustion Emissions = (7.1 mmBtu/hr) \* (7.6 lb/mmcf) / (1,050 mmBtu/mmcf)

Combustion Emissions = 0.051 lb/hr

Aluminum Melting Emissions = (maximum capacity) \* (emission factor) / (2,000 lbs/ton)

Aluminum Melting Emissions = (4,400 lbs/hr) \* (1.1 lbs/ton) / (2,000 lbs/ton)

Aluminum Melting Emissions = 2.42 lbs/hr

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$$\text{Emissions} = 0.051 + 2.42 = 2.47 \text{ lbs/hr}$$

Compliance may also be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

b. Emissions Limitation

PE from this emissions unit shall not exceed 10.83 TPY.

Applicable Compliance Method

Compliance shall be determined using AP-42 Table 1.4-2 (July 1998) for the combustion emissions, Table 11-2 of "Air Quality Permits: A Handbook for Regulators and Industry" (STAPPA-ALAPCO, 5/30/91) for aluminum melting emissions and inputs representing the potential to emit, as follows:

$$\text{Emissions} = \text{Combustion Emissions} + \text{Aluminum Melting Emissions}$$

$$\text{Combustion Emissions} = (\text{maximum furnace heat input}) * (\text{emission factor}) * (8,760 \text{ hrs/yr}) / (\text{fuel heat content}) / (2,000 \text{ lbs/ton})$$

$$\text{Combustion Emissions} = (7.1 \text{ mmBtu/hr}) * (7.6 \text{ lb/mmcf}) * (8760 \text{ hrs/yr}) / (1,050 \text{ mmBtu/mmcf}) / (2,000 \text{ lbs/ton})$$

$$\text{Combustion Emissions} = 0.23 \text{ TPY}$$

$$\text{Aluminum Melting Emissions} = (\text{maximum capacity}) * (\text{emission factor})$$

$$\text{Aluminum Melting Emissions} = (4,400 \text{ lbs/hr}) * (1.1 \text{ lbs/ton}) * (8,760 \text{ hrs/yr}) / (2,000 \text{ lbs/ton}) / (2,000 \text{ lbs/ton})$$

$$\text{Aluminum Melting Emissions} = 10.60 \text{ TPY}$$

$$\text{Emissions} = 0.23 + 10.60 = 10.83 \text{ TPY}$$

c. Emissions Limitation

Visible particulate emissions from any stack shall not exceed 5 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), Appendix A, U.S. EPA Reference Method 9.

Emissions Unit ID: P001

d. Emissions Limitation

CO emissions from this emissions unit shall not exceed 0.57 lb/hr.

Applicable Compliance Method

Compliance shall be determined using AP-42 Table 1.4-1 (July 1998) and inputs representing the potential to emit, as follows:

Emissions = (maximum heat input rating) \* (emission factor) / (fuel heat content)

Emissions = (7.1 mmBtu/hr) \* (84 lb/mmcf) / (1,050 mmBtu/mmcf) = 0.57 lb/hr

Compliance may also be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 10.

**F. Miscellaneous Requirements**

None

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Emissions Unit ID: **P001**

SIC CODE 3363 SCC CODE 3-04-001-03 EMISSIONS UNIT ID P001  
 EMISSIONS UNIT DESCRIPTION Natural Gas-fired Aluminum Reverberatory Furnace No. 1  
 DATE INSTALLED 12/1/06

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	Nonattainment			2.47 lbs/hr	10.83
PM <sub>10</sub>					
Sulfur Dioxide	Attainment				0.018
Organic Compounds	Attainment				0.16
Nitrogen Oxides	Attainment				2.96
Carbon Monoxide	Attainment			0.57 lb/hr	2.49
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? N/A      NESHAP? N/A      PSD? N/A      OFFSET POLICY? N/A

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

**Compliance with emissions limitations, melting clean charge only, record keeping, and reporting.**

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 NO

IDENTIFY THE AIR CONTAMINANTS: N/A