



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL
SHELBY 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: 05-10692

DATE: 6/28/2001

Ross Aluminum Foundries
Ted Settlage
815 N Oak St
Sidney, OH 45365

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, Manager
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

SWDO



**Permit To Install
Terms and Conditions**

**Issue Date: 6/28/2001
Effective Date: 6/28/2001**

FINAL PERMIT TO INSTALL 05-10692

Application Number: 05-10692
APS Premise Number: 0575010009
Permit Fee: **\$200**
Name of Facility: Ross Aluminum Foundries
Person to Contact: Ted Settlege
Address: 815 N Oak St
Sidney, OH 45365

Location of proposed air contaminant source(s) [emissions unit(s)]:

**815 N Oak Ave
Sidney, Ohio**

Description of proposed emissions unit(s):

DEEP FLUIDIZED BED MODULAR SAND LION-1000 LBS/HR CASTINGS AND 3000 LBS/HR SAND CAPACITY.

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

Ross Aluminum Foundries
PTI Application: 05-10692
Issued: 6/28/2001

Facility ID: 0575010009

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 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.

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Issued: 6/28/2001

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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>
CO	10
PE	4.4
OC	1.9
Nox	7.4

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>	<u>Applicable Emissions Limitations/Control Measures</u>
P036 - Deep Fluidized Bed Modular Sand Lion	OAC rule 3745-31-05(a)(3)	2.4 lbs CO/hr, 10 TPY CO 1.0 lb PE/hr, 4.4 TPY PE 0.43 lb OC/hr, 1.9 TPY OC 1.7 lbs NOx/hr, 7.4 TPY NOx The visible fugitive particulate emissions from this emission unit shall not exceed 5 percent opacity as a 3-minute average from any building opening.
	OAC rule 3745-21-09(G)	Exempt
	OAC rule 3745-17-07(B)(1)	The emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	See A.2.a.
	OAC rule 3745-17-11(B)(1)	The emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The emissions unit shall be equipped with two cyclone dust collectors operated according to manufacturer recommendations. The cyclone dust collectors should be operated in a manner to minimize or eliminate visible particulate emissions of fugitive dust from any building opening. The collected particulate shall be emptied/discharged from the cyclone system at a frequency sufficient to ensure proper operation.

If the control equipment is vented to the ambient air, then an outlet emissions rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or no visible emissions from the exhaust stack, whichever is less stringent, shall be maintained.

- 2.b The emissions limitations of 2.38 pounds per hour of carbon monoxide, 0.8 pound per hour of particulate emissions, 0.43 pound per hour of organic compound, 1.7 pounds of nitrogen oxides are based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements with these limitations.
- 2.c The emissions limitations of 10 tons per year of carbon monoxide, 4.4 tons per year of particulate emissions, 1.9 tons per year of organic compound, 7.4 tons per year of nitrogen oxides are based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements with these limitations.

B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

None

D. Reporting Requirements

The permittee shall submit deviation (excursion) reports which identify all exceedances of the annual emissions limitations for this emissions units.

E. Testing Requirements

1. Emission Limitation -
2.4 pounds of carbon monoxide per hour

Applicable Compliance Method -
Compliance shall be determined by the following:

Emissions data provided by the manufacture represents a conservative emissions rate derived from a compendium of stack tests performed on similar sources. If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

2. Emission Limitation -
10 tons of carbon monoxide per year

Applicable Compliance Method -
Compliance shall be determined by the following:

EF = 2.4 pounds of carbon monoxide per hour (based on stack data supplied by Seghers);
HB = Hours to complete each batch - 3 hours;
YB = Number of batches per year - 8760 hours per year/ 3 hours per batch = 2920 batches/yr

Emissions = (EF)(HB)(YB) / (tn/2,000 lbs.)
Emissions = (2.4 lbs CO/ hr)(3 hrs/batch) (2920 batches/yr)(tn/2000 lbs)

* If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

3. Emission Limitation -
1.0 pound of particulate emissions per hour

Applicable Compliance Method -
Compliance shall be determined by the following:

Emissions data provided by the manufacture represents a conservative emissions rate derived from a compendium of stack tests performed on similar sources. If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

4. Emission Limitation -

4.4 tons of particulate emissions per year

Applicable Compliance Method -
 Compliance shall be determined by the following:

EF = 1.0 pound of carbon monoxide per hour (based on stack data supplied by Seghers);
 HB = Hours to complete each batch - 3 hours;
 YB = Number of batches per year - 8760 hours per year/ 3 hours per batch = 2920 batches/yr

Emissions = (EF)(HB)(YB) / (tn/2,000 lbs.)
 Emissions = (1.0 lbs CO/ hr)(3 hrs/batch) (2920 batches/yr)(tn/2000 lbs)

* If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

5. Emission Limitation -
 0.43 pound of organic compounds per hour

Applicable Compliance Method -
 Compliance shall be determined by the following:

Emissions data provided by the manufacture represents a conservative emissions rate derived from a compendium of stack tests performed on similar sources. If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

6. Emission Limitation -
 1.9 tons of organic compounds per year

Applicable Compliance Method -
 Compliance shall be determined by the following:

EF = 0.43 pounds of carbon monoxide per hour (based on stack data supplied by Seghers);
 HB = Hours to complete each batch - 3 hours;
 YB = Number of batches per year - 8760 hours per year/ 3 hours per batch = 2920 batches/yr

Emissions = (EF)(HB)(YB) / (tn/2,000 lbs.)
 Emissions = (0.43 lbs CO/ hr)(3 hrs/batch) (2920 batches/yr)(tn/2000 lbs)

* If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

7. Emission Limitation -
 1.7 pounds of nitrogen oxides per hour

Applicable Compliance Method -
Compliance shall be determined by the following:

Emissions data provided by the manufacture represents a conservative emissions rate derived from a compendium of stack tests performed on similar sources. If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

8. Emission Limitation -
7.4 tons of carbon monoxide per year

Applicable Compliance Method -
Compliance shall be determined by the following:

EF = 2.4 pounds of carbon monoxide per hour (based on stack data supplied by Seghers);
HB = Hours to complete each batch - 3 hours;
YB = Number of batches per year - 8760 hours per year / 3 hours per batch = 2920 batches/yr

Emissions = (EF)(HB)(YB) / (tn/2,000 lbs.)
Emissions = (1.7 lbs CO/ hr)(3 hrs/batch) (2920 batches/yr)

* If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A.

F. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 05-10692 Facility ID: 0575010009

FACILITY NAME Ross Aluminum Foundries

FACILITY DESCRIPTION DEEP FLUIDIZED BED MODULAR SAND LION-1000 LBS/HR CASTINGS AND 3000 LBS/HR SAND CAPACITY. CITY/TWP Sidney

SIC CODE 3365 SCC CODE _____ EMISSIONS UNIT ID P036

EMISSIONS UNIT DESCRIPTION Deep Fluidized Bed Modular Sand Lion

DATE INSTALLED FEB. 2000

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		1.0 lb/hr	4.4	1.0 lb/hr	
PM ₁₀					
Sulfur Dioxide					
Organic Compounds		0.43lb/hr	4.4	0.43lb/hr	4.4
Nitrogen Oxides		1.7 lb/hr	7.4	1.7 lb/hr	7.4
Carbon Monoxide		2.4 lb/hr	10	2.4 lb/hr	10
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?

Isolation of exhaust fans and venting contaminates (PE) into the building.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? _____

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

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants 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: 05-10692

Facility ID: 0575010009

FACILITY NAME Ross Aluminum Foundries

FACILITY DESCRIPTION	DEEP FLUIDIZED BED MODULAR SAND LION-1000 LBS/HR CASTINGS AND 3000 LBS/HR SAND CAPACITY.	CITY/TWP	Sidney
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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 Air PTI**, 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'

	<u>Electronic</u>	<u>Additional information</u> File Name Convention (your PTI # plus this letter)	<u>Hard Copy</u>	<u>None</u>
Calculations (required)	<input type="checkbox"/>	0000000c.wpd	<input type="checkbox"/>	
Modeling form/results	<input type="checkbox"/>	0000000s.wpd	<input type="checkbox"/>	<input type="checkbox"/>
PTI Application (complete or partial)*	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input type="checkbox"/>
BAT Study	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input type="checkbox"/>
Other/misc.	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input type="checkbox"/>

* 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

Ross Aluminum submitted a permit to install application for a sand recycling system in November of 1999. The unit will recycle sand by vaporizing the organic binder off the used molds through heat generated from a natural-gas fired deep fluidized bed.

The emissions unit can process a batch of molds approximately every 3 hours. The molds are placed into a steel basket, with the casting remaining inside of the mold. After the sand is fluidized, the basket and castings are removed from the unit to cool. The emissions unit continues to cycle while the basket is placed in/out of the unit. While removing the basket, the lid of the unit is opened which creates a shower of "boiling" sand. A high-volume, overhead exhaust fan enables the fugitive dust to exit the building during the transferring of the basket. A September 21, 2000 letter from Ohio EPA to Ross Aluminum requested that the company address this potential problem. The company responded with a May 4, 2001 letter indicating that the exhaust fan will be disabled, thus eliminated the opportunity for significant releases of sand to the ambient air. The unit also operates with two cyclone dust collectors which vent into the building.

Emissions factors were provided by Ross Aluminum via the emissions unit's manufacture.

The unit is exempt from 3745-21-07 because no liquid organic materials are employed.

Fees:

PWR 0-1000 lbs =\$200

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

NEW SOURCE REVIEW FORM B

PTI Number: 05-10692

Facility ID: 0575010009

FACILITY NAME Ross Aluminum Foundries

FACILITY DESCRIPTION	CITY/TWP
DEEP FLUIDIZED BED MODULAR SAND LION-1000 LBS/HR CASTINGS AND 3000 LBS/HR SAND CAPACITY.	Sidney

- 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

<u>Pollutant</u>	<u>Tons Per Year</u>
CO	10
PE	4.4
OC	1.9
Nox	7.4