



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: 13-03968

DATE: 6/6/2002

Federal Metal Company (the)
Robert Marr
7250 Division Street
Oakwood Village, OH 44146

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

CBAPC



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

FINAL PERMIT TO INSTALL 13-03968

Application Number: 13-03968
APS Premise Number: 1318400068
Permit Fee: **\$600**
Name of Facility: Federal Metal Company (the)
Person to Contact: Robert Marr
Address: 7250 Division Street
Oakwood Village, OH 44146

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

**7250 Division Street
Oakwood Village, Ohio**

Description of proposed emissions unit(s):

Rocking Furnace F-3 rated at 8.0 MM BTU/hr using an oxy-fuel burner to melt brass and bronze scrap metal-- P007.

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

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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

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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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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	13.9 tpy
Pb	0.59 tpy
CO	2.09 tpy
OC	0.27 tpy
SO ₂	0.02 tpy
NO _x	2.49 tpy

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>
P007 - Rocking Furnace (F-3) rated for 8.0 MM BTU/hr using an oxy-fuel burner to melt brass and bronze scrap metal, at a maximum production rate of 5,000 lbs per hour.	OAC rule 3745-31-05(A)(3)
	40 CFR Part 60, Subpart M
	OAC rule 3745-17-07(A)
	OAC rule 3745-17-07 (B)(1)
	OAC rule 3745-17-08(B)
	OAC rule 3745-17-11(A)(2)

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Emissions Unit ID: **P007**

Applicable Emissions Limitations/Control Measures	period.
Stack: 0.022 grain/dscf 3.4 lbs/hr PE (based on an air flow rate of 17,950 SCFM) 10.8 tpy PE	Fugitive visible particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a six-minute average, during any sixty-minute observation period.
0.15 lb/hr Pb 0.46 tpy Pb (Pb emissions are a fraction of the PE emissions)	The emission limitation established by this rule is equivalent to emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
0.66 lb/hr CO 2.09 tpy CO	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
0.09 lb/hr OC 0.27 tpy OC	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
0.01 lb/hr SO ₂ 0.02 tpy SO ₂	Reasonably available control measures must be employed sufficiently to minimize or eliminate visible emissions of fugitive dust. See A.2.b
0.78 lb/hr NO _x 2.49 tpy NO _x	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Fugitive: 3.05 tpy PE 0.13 tpy Pb	
See A.2.a	
Visible particulate emissions from the exhaust of the baghouse shall not exceed 10 percent opacity, as a six-minute average, during any sixty-minute observation	

2. Additional Terms and Conditions

- 2.a** In order to insure the adequacy of the baghouse emission control system for furnaces F-1 (P001), F-3 (P007), E-1 (P005), and E-2 (P006) while this furnace is in operation during the charging, melting, and tapping cycles, the applicant shall not operate this furnace, F-3 (P007), simultaneously with furnace F-1 (P001) and E-1 (P005) or E-2 (P006) at any time, and the applicant shall not operate E-1 (P005) or E-2 (P006) while F-1 (P006) and F-3 (P007) are operating at any time, but the applicant is not precluded from operating furnace E-1 (P005) and furnace E-2 (P006) simultaneously with one other furnace, F-1 (P001) or F-3 (P007), so as to maintain adequate draft at the hood and capture all visible emissions generated during the charging, melting, and tapping cycles as shown below in the following:

Acceptable Operating Furnace Combinations

F-1 (P001) and F-3 (P007);

F-1 (P001) and E-1 (P005) and/or E-2 (P006); or

F-3 (P007) and E-1 (P005) and/or E-2 (P006).

- 2.b** The permittee shall install and use hoods, fans, or other equipment to adequately enclose, contain, capture, vent and sufficiently minimize or eliminate fugitive dust.

B. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 4.0 to 11.0 inches of water while the emissions unit is in operation.
2. The maximum annual operating hours for this emissions unit shall not exceed 6,350 hours per year. This restriction is intended to limit lead emissions below 0.6 tpy to avoid state modeling requirements.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendation, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.
2. The permittee shall inspect the baghouse for leaks and visible particulate emissions at least once a month during operation periods. Records of such inspections shall include at a minimum the date the inspection was conducted, any and all results obtained, any problems discovered, and any corrective action taken.
3. The permittee shall maintain annual records of the operating hours for this emissions unit.

D. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified.
2. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the baghouse had any leaks or visible particulate emissions.

3. The permittee shall submit annual reports which identify any exceedances of the annual operating hours limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

E. Testing Requirements

1. Compliance with the emission limitation(s) in sections A.I.1. and A.I.2. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
0.022 grain/dscf and 3.4 lbs/hr of PE (based on an airflow rate of 17,950 SCFM)

Applicable Compliance Method(s):
Compliance with the mass emission limitation shall be demonstrated by using Methods 1-5 as outlined in 40 CFR Part 60, Appendix A.
 - b. Emission Limitation:
10.8 tpy of PE

Applicable Compliance Method:
Multiply the lb/hr limitation by the annual hours of operation and divide by 2,000 lbs/ton.
 - c. Emission Limitation:
0.15 lb/hr Pb

Applicable Compliance Method:
Compliance with the mass emission limitation shall be demonstrated by using Method 12 as outlined in 40 CFR Part 60, Appendix A.
 - d. Emission Limitation:
0.46 tpy Pb

Applicable Compliance Method:
Multiply the lb/hr limitation by the annual hours of operation and divide by 2,000 lbs/ton.
 - e. Emission Limitation:
0.66 lb/hr of CO

Applicable Compliance Method(s):
To determine compliance use the emission factor (EF) for CO, 35.0 lbs/MM scf, taken from U.S. EPA AP-42 "Compilation of Air Pollutant Emission Factors," Section 1.4, Natural Gas Combustion, 7/98 in the following equation:

(MM scf/ hr) x (lb/MMscf) = lbs/hr of CO

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Feder:

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Compliance with the above hourly CO limitation shall be determined by Method 10 of 40 CFR Part 60, Appendix A, if required by the Ohio EPA or Cleveland LAA.

- f. Emission Limitation:
2.09 tpy of CO
- Applicable Compliance Method:
Multiply the lb/hr limitation by the annual hours of operation and divide by 2,000 lbs/ton.
- g. Emission Limitation:
0.09 lb/hr of OC
- To determine compliance use the emission factor (EF) for OC, 11.0 lbs/MM scf, taken from U.S. EPA AP-42 "Compilation of Air Pollutant Emission Factors," Section 1.4, Natural Gas Combustion, 7/98 in the following equation:
- $$(\text{MM scf/ hr}) \times (\text{lb/MMscf}) = \text{lbs/hr of OC}$$
- Compliance with the above hourly OC limitation shall be determined by Method 25 of 40 CFR Part 60, Appendix A, if required by the Ohio EPA or Cleveland LAA.
- h. Emission Limitation:
0.27 tpy OC
- Applicable Compliance Method:
Multiply the lb/hr limitation by the annual hours of operation and divide by 2,000 lbs/ton.
- i. Emission Limitation:
0.005 lb/hr SO₂
- Applicable Compliance Method(s):
To determine compliance use the emission factor (EF) for SO₂, 0.6 lbs/MM scf, taken from U.S. EPA AP-42 "Compilation of Air Pollutant Emission Factors," Section 1.4, Natural Gas Combustion, 7/98 in the following equation:
- $$(\text{MM scf/ hr}) \times (\text{lb/MMscf}) = \text{lbs/hr of SO}_2$$
- Compliance with the above hourly SO₂ limitation shall be determined by Method 6 of 40 CFR Part 60, Appendix A, if required by the Ohio EPA or Cleveland LAA.
- j. Emission Limitation:
0.02 tpy of SO₂
- Applicable Compliance Method:
Multiply the lb/hr limitation by the annual hours of operation and divide by 2,000 lbs/ton.

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

Applicable Compliance Method(s):

To determine compliance use the emission factor (EF) for NO_x, 100 lbs/MM scf, taken from U.S. EPA AP-42 "Compilation of Air Pollutant Emission Factors," Section 1.4, Natural Gas Combustion, 7/98 in the following equation:

$$(\text{MM scf/ hr}) \times (\text{lb/MMscf}) = \text{lbs/hr of NO}_x$$

Compliance with the above hourly NO_x limitation shall be determined by Method 7 of 40 CFR Part 60, Appendix A, if required by the Ohio EPA or Cleveland LAA.

- l. Emission Limitation:
2.49 tpy NO_x

Applicable Compliance Method:

Multiply the lb/hr limitation by the annual hours of operation and dividing by 2,000 lbs/ton.

- m. Emission Limitation:
Fugitive Emissions:
3.05 tpy PE

Applicable Compliance Method:

The emission limitation was developed by multiplying the uncontrolled particulate emissions, (scf/min) x (gr/dscf) x (lb/gr/lb) x (min/hr), by one (1) minus the capture efficiency of the baghouse (98 %), (1-0.98), which equals 0.96 lb/hr. Multiply the lb/hr value by the annual hours of operation and divide by 2,000 lbs/ton.

- n. Emission Limitation:
Fugitive Emissions:
0.13 tpy Pb

Applicable Compliance Method:

The emission limitation was developed by multiplying the uncontrolled lead emissions, (% Pb content) x (lbs PE/hr), by one (1) minus the capture efficiency of the baghouse (98 %), (1-0.98), which equals 0.04 lb/hr. Multiply the lb/hr value by the annual hours of operation and divide by 2,000 lbs/ton.

- o. Emission Limitation:
Visible emissions from the exhaust of the baghouse shall not exceed 10 percent opacity, as a six-minute average, during any sixty-minute observation period.

Applicable Compliance Method:

Compliance shall be determined through visible emission observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures in OAC rule 3745-17-03(B)(1).

- p. Emission Limitation:
Visible fugitive emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a six-minute average, during any sixty-minute observation period.

Applicable Compliance Method:

Compliance shall be determined through visible emission observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack points from the building housing this emissions unit. Such points shall include, but are not limited to, doorways, windows, and roof monitors.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted no later than 180 days after the initial startup of the emissions unit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission limit for particulate emissions (pounds per hour and gr/dscf), flow rate [dry standard cubic feet per minute (dscfm)] of the exhaust gases from the outlet(s) of the baghouse, and lead emissions (pounds per hour).
 - c. Prior to the emissions testing, the gas flow rates from each emissions unit vented into the baghouse shall be measured.
 - d. The emission testing shall be performed in accordance with 40 CFR Part 60 Subpart M. The sample time and sample volume for each run shall be at least 120 minutes and 1.80 dscm (63.6 dscf).
 - e. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates for particulate emissions and lead:
 - i. USEPA Methods 1 through 5 of 40 CFR, Part 60, Appendix A for PE.

Emissions Unit ID: **P007**

- ii. USEPA Method 12 of 40 CFR, Part 60, Appendix A for lead.

Alternative U.S. EPA approved test methods may be used with the prior approval from the Ohio EPA or Cleveland local air agency.

- f. Compliance with the mass emissions limit for particulate and lead emissions shall be determined by multiplying the gas flow rate from F-3 (P007) (dscfm) by the measured grain loading at the exhaust from the baghouse (gr/dscfm) and multiplying the resulting value by 60 minutes per hour and dividing by 7,000 grains per pound.
- g. The testing shall be performed while one of the following combinations are vented into the baghouse and are being operated at their maximum production capacities or as close to those capacities as physically possible, unless otherwise specified or approved by the Cleveland local air agency:
 - i. F-3 (P007), E-1 (P005), and E-2 (P006);
 - ii. F-3 (P007) and F-1 (P001); or
 - iii. F-3 (P007) only.
- h. No later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland local air agency's refusal to accept the results of the emission test(s).

Personnel from the Cleveland local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland local air agency within 30 days following completion of the test(s).

F. Miscellaneous Requirements

None