



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

RE: FINAL PERMIT TO INSTALL

CUYAHOGA COUNTY

Application No: 13-04670

Fac ID: 1318318427

DATE: 3/4/2008

Agmet Metals, Incorporated
Fred Warren
7800 Medusa Street
Oakwood, OH 44146

CERTIFIED MAIL

	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

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

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

CC: USEPA

CLAA



Permit To Install
Terms and Conditions

Issue Date: 3/4/2008
Effective Date: 3/4/2008

FINAL PERMIT TO INSTALL 13-04670

Application Number: 13-04670
Facility ID: 1318318427
Permit Fee: **\$500**
Name of Facility: Agmet Metals, Incorporated
Person to Contact: Fred Warren
Address: 7800 Medusa Street
Oakwood, OH 44146

Location of proposed air contaminant source(s) [emissions unit(s)]:
5533 Dunham Road
Maple Heights, Ohio

Description of proposed emissions unit(s):
Pyrolysis furnace -- N001.

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

Chris Korleski
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 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 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.

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	0.23
CO	6.93
NOx	2.42
OC	1.53

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 - (N001) - Pyrolysis Furnace controlled by an afterburner and scrubber

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-07(A)(1)	Visible particulate stack emissions from any stack shall not exceed twenty percent opacity, as a 6-minute average.
OAC rule 3745-17-09	0.1 lbs PE/100 lbs material charged
OAC rule 3745-31-05(A)(3)(b)	See A.2.a and A.2.b below.

2. Additional Terms and Conditions

- 2.a The allowable limit from OAC 3745-17-09 is less than ten tons per year; therefore, the Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to this emissions unit.
- 2.b The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NOx, and OC process and natural gas combustion emissions from this air contaminant source since the potential to emit for these pollutants are each less than ten tons per year.

B. Operational Restrictions

1. The permittee shall only burn natural gas as fuel in this emissions unit.
2. The pyrolysis furnace shall be installed, operated, and maintained in accordance with the manufacturer's specifications. The afterburner shall be designed to have a minimum operating temperature of 1600 degrees Fahrenheit, as measured by the afterburner chamber indicator, before ignition of the burner to start each batch cycle.
 - a. during startup the temperature controller for the afterburner chamber shall be set at a minimum of 1600 degrees Fahrenheit; and

- b. for the first batch of the day, or for a subsequent batch after the unit has entered or completed the cool-down state, the afterburner chamber temperature must reach a minimum of 1600 degrees Fahrenheit, as measured by the afterburner chamber indicator, before ignition of the burner to start the batch cycle.

C. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, 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 scrubber, the scrubber water flow rate, and the pH of the scrubber liquor of the scrubber on a daily basis.
3. Whenever the monitored value for the pressure drop across the scrubber, the scrubber water flow rate of the scrubber, and the pH of the scrubber liquor of the scrubber deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
4. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges and values specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop reading, water flow rate, and pH reading immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
5. The acceptable range for the pressure drop across the scrubber is 2 to 5 inches of water. The acceptable flow rate range for the scrubber is 10-25 gallons per minute. The acceptable pH range for the scrubber is 4 to 5.

6. These ranges and values are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality. The permittee may request revisions to the ranges and values based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the ranges and values will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.
7. The permittee shall install, operate and properly maintain a temperature gauge which monitors the temperature of the afterburner combustion chamber.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.
2. The permittee shall submit quarterly reports to the Cleveland DAQ that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
 - a. all periods of time during which the static pressure across the scrubber, the scrubber water flow rate of the scrubber, and/or the scrubber liquor pH of the scrubber did not comply with the levels indicated above;
 - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
 - c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

3. In accordance with the general terms and conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that provides the following information:

- a. for each day during which the afterburner combustion chamber exhaust gas temperature drops below the minimum temperature limitation:
 - i. the date of the excursion;
 - ii. the time interval during which each excursion occurred; and
 - iii. the temperature value during each excursion.

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 method(s):
 - a. Emission Limitation:
0.1 lbs PE/100 lbs material charged

Applicable Compliance Method:
Compliance with the PE limitation shall be determined through emission testing conducted in accordance with U.S. EPA Methods 1 through 5 of 40 CFR Part 60, Appendix A.
 - b. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
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 U.S. EPA Reference Method 9.
2. The permittee shall conduct, or have conducted, emission testing for the control device serving this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted on the scrubber stack within 3 months after achieving full-time operation of the emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for PE, and opacity for the scrubber stack in the appropriate averaging period(s).

- c. The following test method(s) shall be employed on the scrubber stack to demonstrate compliance with the allowable mass emission rate(s):

PE: Method 5 of 40 CFR Part 60, Appendix A.

Opacity: Method 9 of 40 CFR Part 60, Appendix A.

In addition, the following test method(s) shall be employed on the scrubber stack to determine the mass emission rate for CO:

CO: Method 10 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Cleveland DAQ.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. 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 DAQ's refusal to accept the results of the emission test(s).
- f. Personnel from the Cleveland DAQ 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.
- g. 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 DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute" in ORC 3704.03(F)(4)(b) was not necessary because the emissions unit's maximum annual

emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

2. Potential-to-Emit calculations for this emissions unit are as follows:

For natural gas combustion from the primary and secondary burners:

nitrogen oxide emissions:

$$(2.5 \text{ mmBtu/hr})(0.098 \text{ lb NOx/mmBtu}) = 0.25 \text{ lb NOx/hour}$$

$$(0.25 \text{ lb NOx/hour})(8,760 \text{ hours/year})(\text{ton}/2000 \text{ lbs}) = 1.10 \text{ tons NOx/year}$$

$$(3.0 \text{ mmBtu/hr})(0.098 \text{ lb NOx/mmBtu}) = 0.3 \text{ lb NOx/hour}$$

$$(0.3 \text{ lb NOx/hour})(8,760 \text{ hours/year})(\text{ton}/2000 \text{ lbs}) = 1.32 \text{ tons NOx/year}$$

$$\text{Total} = 1.10 \text{ tons NOx/year} + 1.32 \text{ tons NOx/year} = 2.42 \text{ tons NOx/year}$$

carbon monoxide emissions:

$$(2.5 \text{ mmBtu/hr})(0.0824 \text{ lb CO/mmBtu}) = 0.21 \text{ lb CO/hour}$$

$$(0.21 \text{ lb CO/hour})(8,760 \text{ hours/year})(\text{ton}/2000 \text{ lbs}) = 0.92 \text{ ton CO/year}$$

$$3.0 \text{ mmBtu/hr})(0.0824 \text{ lb CO/mmBtu}) = 0.25 \text{ lb CO/hour}$$

$$(0.25 \text{ lb CO/hour})(8,760 \text{ hours/year})(\text{ton}/2000 \text{ lbs}) = 1.10 \text{ tons CO/year}$$

$$\text{Total} = 0.92 \text{ tons CO/year} + 1.10 \text{ tons CO/year} = 2.02 \text{ tons CO/year}$$

For the Pyrolysis Furnace Operation:

particulate emissions:

OAC rule 3745-17-09: 0.1 lbs PE/100 lbs material charged

Worst case material charge: 1,500 lbs material charged/hour

Maximum operating schedule: 8,760 hours/year

$(0.1 \text{ lbs PE}/100 \text{ lbs mat'l})(1,500 \text{ lbs mat'l/hr})(8,760 \text{ hrs/yr})(\text{ton}/2,000 \text{ lbs}) = 6.57 \text{ tons PE/yr}$

carbon monoxide:

$(100 \text{ ppm})(28 \text{ molecular weight})(2,563 \text{ dscfm})(1.5584 \times 10^{-7}) = 1.12 \text{ lbs CO/hour}$

$(1.12 \text{ lbs CO/hour})(8,760 \text{ hours/year})(\text{ton}/2000 \text{ lbs}) = 4.91 \text{ tons CO/year}$

organic compounds:

$(20 \text{ ppm})(44.09 \text{ molecular weight})(2,563 \text{ dscfm})(1.5584 \times 10^{-7}) = 0.35 \text{ lb OC/hour}$

$(0.35 \text{ lb OC/hour})(8,760 \text{ hours/year})(\text{ton}/2000 \text{ lbs}) = 1.53 \text{ tons OC/year}$

Totals from natural gas combustion and pyrolysis furnace:

2.02 tons CO/year + 4.91 tons CO/year = 6.93 tons CO/year

6.57 tons PE/year

2.42 tons NOx/year

1.53 tons OC/year

