



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
COLUMBIANA 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: 02-22462

Fac ID: 0215090009

DATE: 1/15/2008

Quaker City Castings
Joe Korff
310 Euclid St.
Salem, OH 44460

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

NEDO



**Permit To Install
Terms and Conditions**

**Issue Date: 1/15/2008
Effective Date: 1/15/2008**

FINAL PERMIT TO INSTALL 02-22462

Application Number: 02-22462
Facility ID: 0215090009
Permit Fee: **\$4000**
Name of Facility: Quaker City Castings
Person to Contact: Joe Korff
Address: 310 Euclid St.
Salem, OH 44460

Location of proposed air contaminant source(s) [emissions unit(s)]:
**310 Euclid St.
Salem, Ohio**

Description of proposed emissions unit(s):
Machining lines, mold machine, electric induction furnace, sand mixer.

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

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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>
PE	21.09
Volatile Organic Compounds	0.26
combined HAPs	1.58

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 -(F022) - Large Palmer Sand Mixer/Mold Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>Fugitive particulate (PE) emissions shall not exceed 12.88 tons per year. See section A.2.a.</p> <p>Fugitive volatile organic compound (VOC) emissions shall not exceed 0.26 ton per year.</p> <p>Fugitive formaldehyde, a single Hazardous Air Pollutant (HAP), emissions shall not exceed 0.26 ton per year.</p> <p>Fugitive visible particulate emissions shall not exceed 10 percent opacity as a three-minute average.</p> <p>Compliance with OAC rule 3745-17-08(B). See also section A.2.b.</p>
OAC rule 3745-17-07(B)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-08(B)	The permittee shall utilize reasonably available control measures (RACM) appropriate to minimize or eliminate visible particulate emissions of fugitive dust. See section A.2.b.

2. Additional Terms and Conditions

- 2.a The fugitive particulate limitation in section A.1 was calculated using the maximum production rate of 8.4 tons sand per hour. Therefore, as long as the sand usage at this emissions unit does not exceed 8.4 tons per hour, then compliance with the stated particulate emission limitation can be assumed.
- 2.b "Reasonably available control measures" means the control technology which enables a particular fugitive dust source to achieve the lowest particulate matter

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emission level possible and which is reasonably available considering technological feasibility and cost-effectiveness. RACM for this emissions unit shall include, but not be limited to, keeping the operation within the building enclosure. Compliance with the requirements of OAC rule 3745-17-08(B) is demonstrated when compliance with the visible particulate emission limitation of OAC rule 3745-31-05(A)(3) is achieved and maintained.

B. Operational Restrictions

1. The maximum production rate of 8.4 tons sand per hour shall not be exceeded.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record the following information each day:
 - a. the amount of sand used, in tons;
 - b. the amount of each type of binder or resin used, in pounds or tons;
 - c. the number of hours of operation; and
 - d. the average hourly rate of sand usage, calculated by dividing the daily sand usage (1.a) by the number of hours of operation (1.c).
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit).

Emissions Unit ID: **F022**

With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

If no visible emissions are noted for each weekly visible emission check for three months, then the frequency may become monthly. If visible emissions are noted during a monthly inspection, the permittee shall revert to weekly visible emission checks until no visible emissions are documented for an entire three months, at which time the permittee may again perform inspections on a monthly basis.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify any record of the average sand usage rate over 8.4 tons per hour.

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions. The written reports shall be submitted quarterly to the Ohio EPA Northeast District Office, i.e., by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter.

If no deviations occurred during the calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month periods.

If no visible emissions of fugitive dust were observed during the semiannual period, the permittee shall submit the semiannual report which states that no visible emissions of fugitive dust were observed.

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E. Testing Requirements

1. Emission Limitation:
Fugitive particulate (PE) emissions shall not exceed 12.88 tons per year.

Applicable Compliance Method:

Compliance shall be determined by the monitoring and record keeping in section C.1.d. If the average hourly sand usage does not exceed 8.4 tons per hour, then compliance with the above stated emissions limitation can be assumed.

2. Emission Limitation:
Fugitive volatile organic compound (VOC) emissions shall not exceed 0.26 ton per year.

Applicable Compliance Method:

Compliance shall be determined by the following equation:

$$E = S \times EF \times \text{ton}/2,000 \text{ lbs}$$

where;

$$E = \text{VOC emissions, in tons/year}$$

$$S = \text{Amount of sand used, in tons/year, determined by the summation of the daily record of sand usage during the year.}$$

$$EF = \text{Emission Factor, in lb VOC/ton sand. Based on the information reported in the permit application (Alphaset:Sand ratio = 0.278 ounce/pound, VOC = formaldehyde, formaldehyde concentration in Alphaset = 0.99%, and formaldehyde emissions at 2.0%), the emission factor was calculated to be 0.0069 lb/ton. If operations change (resin:sand ratio changes) and/or if the type of resin(s) changes, this emission factor must be re-calculated.}$$

3. Emission Limitation:
Fugitive formaldehyde (a single HAP) emissions shall not exceed 0.26 ton per year.

Applicable Compliance Method:

Compliance shall be determined by the following equation:

Emissions Unit ID: **F022**

$$E = S \times EF \times \text{ton}/2,000 \text{ lbs}$$

where;

E = Formaldehyde emissions, in tons/year

S = Amount of sand used, in tons/year, determined by the summation of the daily record of sand usage during the year.

EF = Emission Factor, in lb formaldehyde/ton sand. Based on the information reported in the permit application (Alphaset:Sand ratio = 0.278 ounce/pound, formaldehyde concentration in Alphaset = 0.99%, and formaldehyde emissions at 2.0%), the emission factor was calculated to be 0.0069 lb/ton. If operations change (resin:sand ratio changes) and/or the type of resin(s) changes, this emission factor must be re-calculated.

4. Emission Limitation:
Fugitive visible particulate emissions shall not exceed 10 percent opacity as a three-minute average.

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Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

F. Miscellaneous Requirements

None

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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 - (F029) - Ajax Electric Induction Furnace No 3

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>Fugitive particulate (PE) emissions shall not exceed 1.69 tons per year.</p> <p>Fugitive combined HAP emissions shall not exceed 1.32 tons per year.</p> <p>Fugitive visible particulate emissions shall not exceed 10 percent opacity as a three-minute average.</p> <p>See section A.2.a.</p> <p>Compliance with OAC rule 3745-17-08(B). See also section A.2.b.</p>
OAC rule 3745-17-07(B)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-08(B)	The permittee shall utilize reasonably available control measures (RACM) appropriate to minimize or eliminate visible particulate emissions of fugitive dust. See section A.2.b.

2. Additional Terms and Conditions

- 2.a The fugitive particulate emissions limitation was calculated using the maximum metal throughput of 3,756 tons per year. The fugitive combined HAP emissions limitation was calculated using the maximum metal throughput of 2,918 tons per rolling 12-months for monel production. Therefore, as long as the respective metal throughputs are not exceeded, then compliance with the stated emissions limitations can be assumed.

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- 2.b** "Reasonably available control measures" means the control technology which enables a particular fugitive dust source to achieve the lowest particulate matter emission level possible and which is reasonably available considering technological feasibility and cost-effectiveness. RACM for this emissions unit shall include, but not be limited to, keeping the operation within the building enclosure. Compliance with the requirements of OAC rule 3745-17-08(B) is demonstrated when compliance with the visible particulate emission limitation of OAC rule 3745-31-05(A)(3) is achieved and maintained.

B. Operational Restrictions

1. The metal throughput in this emissions unit shall not exceed the maximum design capacity of the furnace which is 0.5 tons per hour and 3,756 tons per year. Of the 3,756 tons of metal, the amount of metal for monel production shall not exceed 2,918 tons per rolling 12-months.
2. To minimize HAP emissions from the melting of scrap in this emissions unit, the permittee shall purchase and charge only certified-metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, oil filters, oily turnings, lead components, mercury switches, plastics, or organic liquids.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record the following information for each day:
 - a. the amount of metal, in tons, charged to this emissions unit;
 - b. the amount of metal, in tons, charged to this emissions unit for monel production.

If the emissions unit is out of operation for the required maintenance, the permittee shall record zero for both 1.a and 1.b above.

2. The permittee shall record the following information for each month:
 - a. the total amount of metal, in tons, charged to this emissions unit for monel production; and
 - b. the total amount of metal, in tons, charged to this emissions unit for monel production over the past 12-months, (summation of 2.a for the past 12-months).

Emissions Unit ID: **F029**

3. The permittee shall record the total amount of metal, in tons, charged to this emission unit each calendar year.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

5. The permittee shall inspect each delivery of purchased scrap material to ensure that the material melted in this emissions unit is only certified-metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, oil filters, oily turnings, lead components, mercury switches, plastics, or organic liquids.

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The permittee shall record the following information for each delivery of scrap material:

- a. date of when purchased scrap material is received on site;
- b. inspection findings of the purchased material;
- c. date and time of inspection of each charge to this emissions unit; and
- d. inspection findings of the charged material to this emissions unit.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month periods.

If no visible emissions of fugitive dust were observed during the semiannual period, the permittee shall submit the semiannual report which states that no visible emissions of fugitive dust were observed.

2. The permittee shall report any record indicating the metal throughput exceeded 3,756 tons per year. This report may be included with the semiannual report covering the July 1 - December 31 period.
3. The permittee shall report any monthly record indicating the metal throughput for monel production exceeded 2,918 tons per rolling 12-months. This report shall be included in the quarterly deviation reports, as required in the General Terms and Conditions of this permit.

E. Testing Requirements

1. Emission Limitation:
Fugitive particulate (PE) emissions shall not exceed 1.69 tons per year.

Applicable Compliance Method:

Compliance shall be determined by the monitoring and record keeping in section C.2. If the metal throughput does not exceed 3,756 tons per calendar year, then compliance with the above stated emissions limitation can be assumed.

2. Emission Limitation:

Emissions Unit ID: **F029**

Fugitive combined HAP emissions shall not exceed 1.32 tons per year.

Applicable Compliance Method:

Compliance shall be determined by the monitoring and record keeping in section C.2. If the metal throughput for monel production does not exceed 2,918 tons per rolling 12-months, then compliance with the above stated emissions limitation can be assumed.

4. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 10 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

F. Miscellaneous Requirements

None

Issued: 1/15/2008

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 - (P006) - 5 Dry Turn and Bore Machines equipped with three Torrit dust collectors

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>Particulate (PE) emissions from the combined dust collector stacks shall not exceed 0.008 grains/dry standard cubic foot, 0.82 pound per hour, and 3.60 tons per year.</p> <p>Visible particulate emissions from each dust collector stack shall not exceed 5% opacity as a six-minute average.</p> <p>See section A.2.a.</p>
OAC rule 3745-17-07(A)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Dust collector #1 shall be in operation when Turn and Bore Machines #1 and/or #2 are/is in operation. Dust collector #2 shall be in operation when Turn and Bore Machines #3 and/or #4 are/is in operation. Dust collector #3 shall be in operation when Turn and Bore Machine #5 is in operation. The particulate emission limitations were calculated using the dust collector manufacturer's specification of 0.008 grains/dry standard cubic foot.
- 2.b Hazardous Air Pollutant emissions were calculated at the reported maximum production rates and found to be very minimal.

B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the pressure drop in inches of water across each dust collector during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall record the pressure drop in inches of water across each dust collector on a daily basis, only when the machine(s) serving the dust collector is(are) in operation.

The acceptable range for the pressure drop across each dust collector shall be based upon the manufacturer's specifications. The permittee has reported this range to be 0.5 to 5.0 inches of water. This range is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Northeast District Office. The permittee may request revisions to the pressure drop range 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 pressure drop range 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.

Whenever the monitored value for the pressure drop deviates from the specified range, 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.

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 dust collector within the acceptable pressure drop range, 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

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readings 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.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations 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 operation, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

If no visible emissions are noted for each weekly visible emission check for three months, then the frequency may become monthly. If visible emissions are noted during a monthly inspection, the permittee shall revert to weekly visible emission checks until no visible emissions are documented for an entire three months, at which time the permittee may again perform inspections on a monthly basis.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of each dust collector during the operation of this emissions unit:
 - a. each period of time when the pressure drop across each dust collector was outside of the range specified by the manufacturer (0.5 to 5.0 inches);
 - 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

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- 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.

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions. The written reports shall be submitted quarterly to the Ohio EPA Northeast District Office, i.e., by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter.

If no deviations occurred during the calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

2. 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 Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

If no visible emissions were observed during the semiannual period, the permittee shall submit the semiannual report which states that no visible emissions were observed.

E. Testing Requirements

1. Emission Limitation:
Particulate (PE) emissions from the combined dust collector stacks shall not exceed 0.008 grains/dry standard cubic foot, 0.82 pound per hour, and 3.60 tons per year.

Applicable Compliance Method:

If required, compliance shall be determined by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5.

2. Emission Limitation:
Visible particulate emissions from each dust collector stack shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method:

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

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F. Miscellaneous Requirements

None

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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 - (P010) - Multipart Centrifugal Mold Machine equipped with a wet scrubber

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>Particulate (PE) emissions from the wet scrubber stack shall not exceed 0.67 pound per hour and 2.92 tons per year.</p> <p>Visible particulate emissions from the wet scrubber stack shall not exceed 5% opacity as a six-minute average.</p> <p>See sections A.2.a through c.</p>
OAC rule 3745-17-07(A)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The wet scrubber shall be in operation when this emissions unit is in operation.
- 2.b The short term and long term emission limitations for particulates were calculated using the maximum production rates of 1 ton metal poured per hour and 8,760 tons metal poured per year. Therefore, as long as the amount of metal poured at this emissions unit does not exceed these maximum production rates, then compliance with the stated emissions limitations can be assumed.
- 2.c Hazardous Air Pollutant emissions were calculated at the reported maximum production rates and found to be minimal.

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B. Operational Restrictions

1. The maximum production rates of 1 ton metal poured per hour and 8,760 tons metal poured per year shall not be exceeded.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record the following information for each day the emissions unit is in operation:
 - a. the amount of metal poured, in tons each day;
 - b. the number of hours of operation each day;
 - c. the average hourly rate of metal pouring, calculated by dividing the daily amount of metal poured (1.a) by the number of hours of operation (1.b); and
 - d. the total amount of metal poured, in tons, each year as calculated by the summation of (1.a) for each day of the year.

If the emissions unit is not in operation, the permittee shall record "no operation" for that day.

2. The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop across the scrubber and the scrubber liquid flow rate while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturers' recommendations, instructions and operating manuals.

The permittee shall record the following information each day for each day the emissions unit is in operation:

- a. pressure drop across the scrubber, in inches of water; and
- b. scrubber liquid flow rate, in gallons per minute.

The acceptable range for the above parameters shall be based upon the manufacturer's specifications. The permittee has reported the manufacturer's specifications to be as follows:

- a. minimum pressure drop across the scrubber is 18 inches of water
- b. minimum scrubber water flow rate is 22.5 gallons per minute

These specifications are effective for the duration of this permit, unless revisions

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are requested by the permittee and approved in writing by the Northeast District Office. The permittee may request revisions to the specifications based upon information obtained during future emission tests that demonstrate compliance with the allowable emissions rates for this emissions unit. In addition, approved revisions to any specification 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.

Whenever the monitored value for any parameter deviates from specification, 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.

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 scrubber within the acceptable specifications, 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 parameter readings 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.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations 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 operation, 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.

If no visible emissions are noted for each weekly visible emission check for three months, then the frequency may become monthly. If visible emissions are noted during a monthly inspection, the permittee shall revert to weekly visible emission checks until no visible emissions are documented for an entire three months, at which time the permittee may again perform inspections on a monthly basis.

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D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the scrubber during the operation of this emissions unit:
 - a. each period of time when the static pressure across the scrubber and/or the scrubber liquid flow rate did not comply with the manufacturer's specifications;
 - 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 reading back to the specification, 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.

The permittee shall also report any production over the maximum rates of 1 ton metal poured per hour and 8,760 tons metal poured per year.

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions. The written reports shall be submitted quarterly to the Ohio EPA Northeast District Office, i.e., by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter.

If no deviations occurred during the calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

2. 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 Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

If no visible emissions of were observed during the semiannual period, the

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permittee shall submit the semiannual report which states that no visible emissions were observed.

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E. Testing Requirements

1. Emission Limitation:
Particulate (PE) emissions from the wet scrubber stack shall not exceed 0.67 pound per hour and 2.92 tons per year.

Applicable Compliance Method:

Compliance shall be determined by the monitoring and record keeping in sections C.1.c and C.1.d. If the maximum production rates of 1 ton metal poured per hour and 8,760 tons metal poured per year are not exceeded, then compliance with the above stated emissions limitations can be assumed.

2. Emission Limitation:
Visible particulate emissions from the wet scrubber stack shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method:

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

F. Miscellaneous Requirements

None