State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION** **CERTIFIED MAIL**
**PORTAGE COUNTY**

Street Address:
122 S. Front Street
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

**Application No: 16-01897**
**Fac ID:** 1667070012
**DATE: 11/4/2004**

Foundry Systems International
Glen Johnson
5159 S. PROSPECT ST.
RAVENNA, OH 44266-9031

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

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

cc: **USEPA** **ARAQMD**

OhioEPA

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**Permit To Install** **Issue Date: 11/4/2004**
**Terms and Conditions** **Effective Date: 11/4/2004**

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 16-01897**

| | |
|---|---|
| Application Number: | 16-01897 |
| Facility ID: | 1667070012 |
| Permit Fee: | **$3600** |
| Name of Facility: | Foundry Systems International |
| Person to Contact: | Glen Johnson |
| Address: | 5159 S. PROSPECT ST.<br>RAVENNA, OH 44266-9031 |

Location of proposed air contaminant source(s) [emissions unit(s)]:
**5159 S. Prospect Road**
**Ravenna, OH**, **Ohio**

Description of proposed emissions unit(s):
**Administrative modification of PTI 16-01897 issued final on June 19, 2001 to change permit allowable to correspond to stack test results and establish T5 synthetic minor strategy.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

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

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions

and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio 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**

| Pollutant | Tons Per Year |
|---|---|
| Particulate Matter | 32.4 |
| Sulfur Dioxide | 34.9 |
| Organic Compounds | 95.8* |
| Nitrogen Oxides | 28.0 |
| Carbon Monoxide | 69.1 |
| Phenol | 2.9 |
| Fluoride | 2.9 |

Emissions Unit ID: **F001**

## 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 | Applicable Rules/Requirements | OAC rule 3745-17-07(A)(1) |
|---|---|---|
| F001 - Eleven floor pouring and cooling operations. Five from furnaces #3 (P901), two from furnace #4 (P904), and four from Furnace #5(P905).<br><br>Uncontrolled emission unit with fugitive emissions only.<br><br>(Modified) | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-11(B) |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.64 Lb/Hr Sulfur Dioxide<br>2.79 Tons/Yr. Sulfur Dioxide | this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 1.79 Lbs/Hr Carbon Monoxide<br>7.84 Tons/Yr Carbon Monoxide | |
| 2.71 Lbs/Hr Volatile Organic Compounds<br>18.45 Tons/Yr Volatile Organic Compounds | |
| 0.43 Lb/Hr Particulates<br>1.88 Tons/Yr Particulates | |
| 0.05 Lbs/Hr Phenol<br>0.22 Tons/Yr Phenol | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average from any building opening or roof vent, except as specified by rule. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |
| The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). | |
| The emission limitation specified by | |

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant,
or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or record keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any abnormal visible emission incident; and

e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

   a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

   b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

   c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

   d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

   e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

   a. identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

   b. visible emissions in excess of 5 percent opacity; and

   c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

   These reports shall be submitted to the Akron Regional Air Quality Management District

(ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

1. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      0.43 lb/hr of particulate matter
      1.88 tons/yr particulate matter

      Applicable Compliance Method:

      Multiply the particulate emission factor of 0.34 pound of particulate emissions per ton of metal melted by the maximum hourly rate of metal melted. This particulate emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources.

   b. Emission Limitation:

      0.64 lb/hr of sulfur dioxide
      2.79 tons/yr sulfur dioxide

      Applicable Compliance Method:

Multiply the sulfur dioxide emission factor of 0.51 pound of sulfur dioxide emissions per ton of metal melted by the maximum hourly rate of metal melted. This sulfur dioxide emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources.

c. Emission Limitation:

1.79 lbs/hr of carbon monoxide
7.84 tons/yr carbon monoxide

Applicable Compliance Method:

Multiply the carbon monoxide emission factor of 1.43 pound of carbon monoxide per ton of aluminum melted in the furnace by the total amount of aluminum melted in the furnace. This
CO emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources.

d. Emission Limitation:

2.71 lbs/hr volatile organic compounds
18.45 tons/yr of volatile organic compounds

Applicable Compliance Method:

Compliance with the lbs/hr limitation shall be determined by multiplying the volatile organic compounds emission factor of 2.17 pounds of VOC per ton of aluminum poured by the maximum rated capacity (1.25 tons/hr) of aluminum poured in the emissions unit. This VOC emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources. Compliance with the annual emissions limitation shall be determined by multiplying the volatile organic compounds emission factor of 2.17 pounds VOC per ton of aluminum poured by the established operational restriction (17,000 tons/yr) of aluminum poured in the facility.

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

f. Emission Limitation:

0.05 Lbs/Hr Phenol
0.22 Tons/Yr Phenol

Applicable Compliance Method:

Multiply the phenol emission factor of 0.04 pound of phenol per ton of metal processed in the furnace by the total amount of metal processed in the furnace. This phenol emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | |
|---|---|---|
| F002 - Pouring and cooling line #1. Six devices with two molds each on a rotating turn table.<br><br>(Modified) | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-07(A)(1)<br><br>OAC rule 3745-17-11(B) |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.41 Lb/Hr Sulfur Dioxide<br>1.80 Tons/Yr Sulfur Dioxide | 3745-31-05(A)(3).<br><br>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 1.14 Lbs/Hr Carbon Monoxide<br>5.00 Tons/Yr Carbon Monoxide | |
| 1.74 Lbs/Hr Volatile Organic Compounds<br>18.45 Tons/Yr Volatile Organic Compounds | |
| 0.27 Lb/Hr Particulates<br>1.18 Tons/Yr Particulates | |
| 0.03 Lbs/Hr Phenol<br>0.13 Tons/Yr Phenol | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average from any building opening or roof vent, except as specified by rule. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |
| The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule | |

Emissions Unit ID: **F002**

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or record keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

   a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

   b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

   c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

   d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

   e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

   a. identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

   b. visible emissions in excess of 5 percent opacity; and

   c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

   These reports shall be submitted to the Akron Regional Air Quality Management District

(ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

1. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      0.27 lb/hr of particulate matter
      1.18 tons/yr particulate matter

      Applicable Compliance Method:

      Multiply the particulate emission factor of 0.34 pound of particulate emissions per ton of metal melted by the maximum hourly rate of metal melted. This particulate emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources.

   b. Emission Limitation:

      0.41 lb/hr of sulfur dioxide
      1.80 tons/Yr sulfur dioxide

      Applicable Compliance Method:

Multiply the sulfur dioxide emission factor of 0.51pound of sulfur dioxide emissions per ton of metal melted by the maximum hourly rate of metal melted. This sulfur dioxide emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources.

c. Emission Limitation:

1.14 lbs/hr of carbon monoxide
5.00 tons/Yr carbon monoxide

Applicable Compliance Method:

Multiply the carbon monoxide emission factor of 1.43 pound of carbon monoxide per ton of aluminum melted in the furnace by the total amount of aluminum melted in the furnace. This CO emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

d. Emission Limitation:

1.74 lbs/hr volatile organic compounds
18.45 tons/yr of volatile organic compounds

Applicable Compliance Method:

Compliance with the lbs/hr limitation shall be determined by multiplying the volatile organic compounds emission factor of 2.17 pounds of VOC per ton of aluminum poured by the maximum rated capacity (0.80 tons/hr) of aluminum poured in the emissions unit. This VOC emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources. Compliance with the annual emissions limitation shall be determined by multiplying the volatile organic compounds emission factor of 2.17 pounds VOC per ton of aluminum poured by the established operational restriction (17,000 tons/yr) of aluminum poured in the facility .

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

f. Emission Limitation:

0.03 Lbs/Hr Phenol
0..13 Tons/Yr Phenol

Applicable Compliance Method:

Multiply the phenol emission factor of 0.04 pound of phenol per ton of metal processed in the furnace by the total amount of metal processed in the furnace. This phenol emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | OAC rule 3745-17-07(A)(1) |
|---|---|---|
| F003 - Pouring and cooling line # 2. Eight devices with two molds each an a rotating turn table.<br><br>(Modified) | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-11(A)(1) |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 1.70Lbs/Hr Sulfur Dioxide<br>7.45 Tons/Yr Sulfur Dioxide | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 4.76 Lbs/Hr Carbon Monoxide<br>20.85 Ton7/Yr Carbon Monoxide | |
| 7.23 Lb/Hr Volatile Organic Compounds<br>18.45 Tons/Yr Volatile Organic Compounds | |
| 1.13 Lb/Hr Particulates<br>4.95 Tons/Yr Particulates | |
| 0.13 Lbs/Hr Phenol<br>0.57 Tons/Yr Phenol | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average from any building opening or roof vent, except as specified by rule. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |
| The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). | |

Emissions Unit ID: **F003**

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or record keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

   e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

   a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

   b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

   c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

   d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

   e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports which:

   a. identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

   b. visible emissions in excess of 5 percent opacity; and

   c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

   These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

1. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      1.13 lb/hr of particulate matter
      4.95 tons/yr particulate matter

      Applicable Compliance Method:

      Multiply the particulate emission factor of 0.34 pound of particulate emissions per ton of metal melted by the maximum hourly rate of metal melted. This particulate emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

   b. Emission Limitation:

      1.70 lb/hr of sulfur dioxide
      7.45 tons/yr sulfur dioxide

      Applicable Compliance Method:

      Multiply the sulfur dioxide emission factor of 0.51 pound of sulfur dioxide emissions per ton of metal melted by the maximum hourly rate of metal melted. This sulfur dioxide emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

c. Emission Limitation:

4.76 lbs/hr of carbon monoxide
20.85 tons/yr carbon monoxide

Applicable Compliance Method:

Multiply the carbon monoxide emission factor of 1.43 pound of carbon monoxide per ton of aluminum melted in the furnace by the total amount of aluminum melted in the furnace. This CO emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

d. Emission Limitation:

7.23 lbs/hr volatile organic compounds
18.45 tons/yr volatile organic compounds

Applicable Compliance Method:

Compliance with the lbs/hr limitation shall be determined by multiplying the volatile organic compounds emission factor of 2.17 pounds of VOC per ton of aluminum poured by the maximum rated capacity (3.33 tons/hr) of aluminum poured in the emissions unit. This VOC emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing and emission factors at similar sources. Compliance with the annual emissions limitation shall be determined by multiplying the volatile organic compounds emission factor of 2.17 pounds VOC per ton of aluminum poured by the established operational restriction (17,000 tons/yr) of aluminum poured in the facility .

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

f. Emission Limitation:

0.13 Lbs/Hr Phenol
0.57 Tons/Yr Phenol

Applicable Compliance Method:

Multiply the phenol emission factor of 0.04 pound of phenol per ton of metal processed in the furnace by the total amount of metal processed in the furnace. This phenol emission

factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | OAC rule 3745-17-07(A)(1) |
|---|---|---|
| P001 - 4.7 MMBtu/hr. Natural gas fired burn-out oven.<br><br>This emissions unit is uncontrolled.<br><br>This emissions unit receives and processes core sand for the entire facility.<br><br>(Modified) | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-11(B) |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.68 Pound/Hr Sulfur Dioxide<br>2.98 Tons/Yr Sulfur Dioxide | this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.36 Pound/Hr Particulate Matter<br>1.58 Tons/Yr Particulate Matter | |
| 0.29 pound per hour phenol<br>1.27 ton per year phenol | |
| 0.07 Pound/Hr Volatile Organic Compounds<br>0.31 Ton/yr Volatile Organic Compounds | |
| 0.42 Lbs/Hr Carbon Monoxide<br>1.84 Tons/Yr Carbon Monoxide | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |
| The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). | |
| The emission limitation specified by | |

Emissions Unit ID: **P001**

## 2. Additional Terms and Conditions

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee shall only fire natural gas as fuel in this emissions unit.

2. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Record keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

   e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the

emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

   a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

   b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

   c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

   d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

   e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports which:

   a. Identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

   b. Visible emissions in excess of 5 percent opacity; and

   c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

   These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. The permittee shall submit quarterly deviation (excursion) reports which include an identification

of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

4. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

1. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      0.36 lb/hr of particulate matter
      1.58 tons/Yr. particulate matter

      Applicable Compliance Method:

      Multiply the particulate emission factor of 0.718 pound of particulate emissions per ton of sand processed by the maximum hourly rate of sand processed. This particulate emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

   b. Emission Limitation:

      0.68 lb/hr of sulfur dioxide
      2.98 tons/yr sulfur dioxide

      Applicable Compliance Method:

      Multiply the sulfur dioxide emission factor of 1.357 pound of sulfur dioxide emissions per ton of sand processed by the maximum hourly rate of sand processed. This sulfur dioxide emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

   c. Emission Limitation:

0.29 pound per hour phenol
1.27 ton per year phenol

Applicable Compliance Method:

Multiply the phenol emission factor of 0.572 pound of phenol per ton of sand processed in the furnace by the total amount of sand processed in the furnace. This phenol emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

d. Emission Limitation:

0.07 lb/hr of volatile organic compounds
0.31 ton/yr of volatile organic compounds

Applicable Compliance Method:

Multiply the volatile organic compounds emission factor of 0.136 pound of VOC per ton of sand processed by the total amount of sand processed in the emissions unit. This VOC emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

f. Emission Limitation:

0.42 Lb/Hr Carbon Monoxide
1.82 Tons/Yr Carbon Monoxide

Applicable Compliance Method:

Multiply the carbon monoxide emission factor of 0.847 pound of CO per ton of sand processed by the maximum hourly rate of sand processed in the emissions unit. This carbon monoxide emission factor was supplied by RMT Inc. Consultants for the permittee

and was based on air testing at similar sources.

## F. Miscellaneous Requirements

1. The permit to install for this emissions unit (P001) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Phenol

   TLV (mg/m3): 19,245

   Maximum Hourly Emission Rate (lbs/hr): 0.286

   Predicted 1-Hour Maximum Ground-Level
   Concentration (ug/m3): 311.5

   MAGLC (ug/m3): 458

   Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

   a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

   b. changes in the composition of the materials, or use of new materials, that would result in

an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**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 | | |
|---|---|---|
| | burners and 0.43 tons per hour melt capacity. Known as Furnace # 3 (ARF# 3). | emissions unit are believed to be split 50/50 between fugitive and stack. |
| P901 - Natural gas fired Aluminum Revererator Furnace, 4-2.5 MMBtu/hr heat input capacity | This emissions unit is not controlled, and has both fugitive and stack emissions. The emissions from this | This emissions unit feed molten aluminum to 5 floor stations. |

| | | |
|---|---|---|
| (Modified) | | |
| | Applicable Rules/Requirements | |
| | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-07(A)(1) |
| | | OAC rule 3745-17-11(B) |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.44 Pound/Hr Nitrogen Oxides<br>1.93 Tons/Yr Nitrogen Oxides | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.72 Pound/Hr Volatile Organic Compounds<br>3.15 Ton/Yr. Volatile Organic Compounds | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.05 Pound/Hr Fluoride or Hydrogen Fluoride<br>0.22 Ton/Yr. Fluoride or Hydrogen Fluoride | |
| 0.25 Pound/Hr Particulate Matter<br>1.10 Tons/Yr. Particulate Matter | |
| 0.006 Lb/Hr Sulfur Dioxide<br>0.03 Tons/Yr Sulfur Dioxide | |
| 0.82 Lbs/Hr Carbon Monoxide<br>3.59 Tons/Yr Carbon Monoxide | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. | |
| Visible particulate emissions from the stack shall not exceed five percent opacity, as a three-minute average. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of

OAC rule 3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee shall only fire natural gas as fuel in this emissions unit.

2. The aluminum melting furnace shall be charged with clean, ingots, bar stock, dry, sawed-off pieces of solid aluminum, aluminum chips and turnings from machining. Materials bearing oil, grease, paint, or paper shall not be employed.

3. Chlorine shall not be added for demagging the aluminum.

4. Alloying, if any performed in this emissions unit shall be done employing only clean materials.

5. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

a. Identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and

b. Visible emissions in excess of 5 percent opacity

c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates, $NO_X$, fluoride or hydrogen fluoride, and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |
| nitrogen oxides | Method 7 or 7E of 40 CFR Part 60, Appendix A |
| fluoride or hydrogen fluoride | Method 13 A or B of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

0.25 lb/hr of particulate matter
1.10 tons/Yr. particulate matter

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results by the number hours the emissions unit operated during the year.

b. Emission Limitation:

0.44 lb/hr. of nitrogen oxides
1.93 Tons/Yr. nitrogen oxides

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 7 or 7E, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year NOx emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 7 test results by the number hours the emissions unit operated during the year.

c. Emission Limitation:

0.05 lb/hr of fluoride, or hydrogen fluoride
0.22 ton/yr of fluoride, or hydrogen fluoride

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 13A or 13B, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year fluoride, or hydrogen fluoride emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 13 test results by the number hours the emissions unit operated during the year.

d. Emission Limitation:

0.72 lb/hr of volatile organic compounds
3.15 ton/yr of volatile organic compounds

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 25 or 25A, 40 CFR 60, Appendix A, as required by sections E.1
through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year organic compound emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 25 or 25A stack test results by the number of hours the emissions unit operated during the year.

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

f. Emission Limitation:

0.82 Lb/Hr Carbon Monoxide (Products of Combustion)
3.59 Tons/Yr Carbon Monoxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0098MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

g. Emission Limitation:

0.006 Lb/Hr Sulfur Dioxide (Products of Combustion)
0.03Tons/Yr Sulfur Dioxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0098 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | |
|---|---|---|
| P902 - Natural gas fired Aluminum Reverberator Furnace, 21MMBtu heat input capacity and 0.80 tons per hour melt capacity. Known as Furnace # 1. | OAC rule 3745-31-05(A)(3) | |
| This emissions unit is not controlled, and has both fugitive and stack emissions. The emissions from this emissions unit are believed to be split 50/50 between fugitive and stack. | | OAC rule 3745-17-07(A)(1) |
| This emissions unit feed molten aluminum to 6 device turntables. | | OAC rule 3745-17-11(B) |
| (Modified) | | |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.82 Pounds/Hr Nitrogen Oxides<br>3.59 Tons/Yr Nitrogen Oxides | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 1.34 Pound/Hr Volatile Organic Compounds<br>5.87 Ton/Yr Volatile Organic Compounds | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.10 Pound/Hr Fluoride or Hydrogen Fluoride<br>0.44 Ton/Yr Fluoride or Hydrogen Fluoride | |
| 0.46 Pounds/Hr Particulate Matter<br>2.01 Tons/Yr Particulate Matter | |
| 0.012 Lb/Hr Sulfur Dioxide<br>0.05 Tons/Yr Sulfur Dioxide | |
| 1.73 Lbs/Hr Carbon Monoxide<br>7.58 Tons/Yr Carbon Monoxide | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. | |
| Visible particulate emissions from the stack shall not exceed five percent opacity, as a three-minute average. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of

OAC rule 3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee shall only fire natural gas as fuel in this emissions unit.

2. The aluminum melting furnace shall be charged with clean, ingots, bar stock, dry, sawed-off pieces of solid aluminum, aluminum chips and turnings from machining. Materials bearing oil, grease, paint, or paper shall not be employed.

3. Chlorine shall not be added for demagging the aluminum.

4. Alloying, if any performed in this emissions unit shall be done employing only clean materials.

5. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

a. identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

b. visible emissions in excess of 5 percent opacity; and

c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate

emissions, or visible emissions greater than 5 percent opacity.

These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates, nitrogen oxides, fluoride or hydrogen fluoride, and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |

| | |
|---|---|
| nitrogen oxides | Method 7 or 7E of 40 CFR Part 60, Appendix A |
| fluoride or hydrogen fluoride | Method 13 A or B of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      0.46 lbs/hr of particulate matter
      2.01 tons/Yr. particulate matter

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results by the number hours the emissions unit operated during the year.

b. Emission Limitation:

0.82 lbs/hr. of nitrogen oxides
3.59 tons/yr. nitrogen oxides

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 7 or 7E, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year NOx emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 7 test results by the number hours the emissions unit operated during the year.

c. Emission Limitation:

0.10 lb/hr of fluoride, or hydrogen fluoride
0.44 ton/Yr of fluoride, or hydrogen fluoride

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 13 A or B, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year fluoride, or hydrogen fluoride emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the

Method 13 test results by the number hours the emissions unit operated during the year.

d. Emission Limitation:

1.34 lb/hr of volatile organic compounds
5.87 ton/yr of volatile organic compounds

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 25 or 25A, 40 CFR 60, Appendix A, as required by sections E.1
through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year organic compound emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 25 or 25A stack test results by the number of hours the emissions unit operated during the year.

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

f. Emission Limitation:

1.73 Lb/Hr Carbon Monoxide (Products of Combustion)
7.58 Tons/Yr Carbon Monoxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0206 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

g. Emission Limitation:

0.012 Lb/Hr Sulfur Dioxide (Products of Combustion)
0.05Tons/Yr Sulfur Dioxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0206 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | |
|---|---|---|
| P903 - Natural gas fired Aluminum Reverberatory Furnace, 21MMBtu heat input capacity and 3.33 tons per hour melt capacity. Known as Furnace # 2. | OAC rule 3745-31-05(A)(3) | |
| This emissions unit is not controlled, and has both fugitive and stack emissions. The emissions from this emissions unit are believed to be split 50/50 between fugitive and stack. | | OAC rule 3745-17-07(A)(1) |
| This emissions unit feed molten aluminum to 8 device turntables. | | OAC rule 3745-17-11(B) |
| (Modified) | | |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 3.43 Pounds/Hr Nitrogen Oxides<br>15.02 Tons/Yr Nitrogen Oxides | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 5.56 Pound/Hr Volatile Organic Compounds<br>24.55 Ton/Yr Volatile Organic Compounds | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.40 Pound/Hr Fluoride or Hydrogen Fluoride<br>1.75 Ton/Yr. Fluoride or Hydrogen Fluoride | |
| 1.93 Pounds/Hr Particulate Matter<br>8.45 Tons/Yr Particulate Matter | |
| 0.012 Lb/Hr Sulfur Dioxide<br>0.05 Tons/Yr Sulfur Dioxide | |
| 1.73 Lbs/Hr Carbon Monoxide<br>7.58 Tons/Yr Carbon Monoxide | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. | |
| Visible particulate emissions from the stack shall not exceed five percent opacity, as a three-minute average. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |

Emissions Unit ID: **P903**

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee shall only fire natural gas as fuel in this emissions unit.

2. The aluminum melting furnace shall be charged with clean, ingots, bar stock, dry, sawed-off pieces of solid aluminum, aluminum chips and turnings from machining. Materials bearing oil, grease, paint, or paper shall not be employed.

3. Chlorine shall not be added for demagging the aluminum.

4. Alloying, if any performed in this emissions unit shall be done employing only clean materials.

5. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

a. Identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

b. Visible emissions in excess of 5 percent opacity; and

c. Describe any corrective actions taken to eliminate the abnormal visible fugitive particulate

emissions, or visible emissions greater than 5 percent opacity.

These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates, nitrogen oxides, fluoride or hydrogen fluoride, and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Emissions Unit ID: **P903**

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |
| nitrogen oxides | Method 7 or 7E of 40 CFR Part 60, Appendix A |
| fluoride or hydrogen fluoride | Method 13 A or B of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      1.93 lbs/hr of particulate matter
      8.45 tons/Yr. particulate matter

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results by the number hours the emissions unit operated during the year.

b. Emission Limitation:

3.43 lbs/hr. of nitrogen oxides
15.02 tons/yr. nitrogen oxides

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 7 or 7E, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year NOx emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 7 test results by the number hours the emissions unit operated during the year.

c. Emission Limitation:

0.40 lb/hr of fluoride, or hydrogen fluoride
1.75 ton/Yr of fluoride, or hydrogen fluoride

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 13 A or B, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Emissions Unit ID: **P903**

Compliance with the tons per year fluoride, or hydrogen fluoride emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 13 test results by the number hours the emissions unit operated during the year.

d. Emission Limitation:

5.56 lb/hr of volatile organic compounds
24.55 tpy of volatile organic compounds

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 25 or 25A, 40 CFR 60, Appendix A, as required by sections E.1
through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year organic compound emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 25 or 25A stack test results by the number of hours the emissions unit operated during the year.

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

f. Emission Limitation:

1.73 Lb/Hr Carbon Monoxide (Products of Combustion)
7.58 Tons/Yr Carbon Monoxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0206 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

g. Emission Limitation:

0.012 Lb/Hr Sulfur Dioxide (Products of Combustion)
0.05Tons/Yr Sulfur Dioxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0206 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

## F. Miscellaneous Requirements

1. The permit to install for this emissions unit (P903) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Hydrogen Flouride

   TLV (mg/m3): 1,809

   Maximum Hourly Emission Rate (lbs/hr): 0.390

   Predicted 1-Hour Maximum Ground-Level
   Concentration (ug/m3): 19.89

   MAGLC (ug/m3): 43

   Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

   a. changes in the composition of the materials used (typically for coatings or cleanup

materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

## 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 | Applicable Rules/Requirements | |
|---|---|---|
| P904 - Natural gas fired Aluminum Reverberator Furnace, 10MMBtu heat input capacity and 0.30 tons per hour melt capacity. Known as Furnace # 4. | OAC rule 3745-31-05(A)(3) | |
| This emissions unit is not controlled, and has both fugitive and stack emissions. The emissions from this emissions unit are believed to be split 50/50 between fugitive and stack. | | OAC rule 3745-17-07(A)(1) |
| This emissions unit feeds molten aluminum to 2 floor molds. | | OAC rule 3745-17-11(B) |
| (Modified) | | |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.31 Pound/Hr Nitrogen Oxides<br>1.36 Tons/Yr.. Nitrogen Oxides | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.50 Pound/Hr Volatile Organic Compounds<br>2.19 Ton/Yr. Volatile Organic Compounds | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.04 Pound/Hr Fluoride or Hydrogen Fluoride<br>0.18 Ton/Yr. Fluoride or Hydrogen Fluoride | |
| 0.17 Pound/Hr Particulate Matter<br>0.74 Tons/Yr. Particulate Matter | |
| 0.006 Lb/Hr Sulfur Dioxide<br>0.03 Tons/Yr Sulfur Dioxide | |
| 0.82 Lbs/Hr Carbon Monoxide<br>3.61 Tons/Yr Carbon Monoxide | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. | |
| Visible particulate emissions from the stack shall not exceed five percent opacity, as a three-minute average. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of

OAC rule 3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee shall only fire natural gas as fuel in this emissions unit.

2. The aluminum melting furnace shall be charged with clean, ingots, bar stock, dry, sawed-off pieces of solid aluminum, aluminum chips and turnings from machining. Materials bearing oil, grease, paint, or paper shall not be employed.

3. Chlorine shall not be added for demagging the aluminum.

4. Alloying, if any performed in this emissions unit shall be done employing only clean materials.

5. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

a. identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

b. visible emissions in excess of 5 percent opacity; and

c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates, nitrogen oxides, fluoride or hydrogen fluoride, and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |
| nitrogen oxides | Method 7 or 7E of 40 CFR Part 60, Appendix A |
| fluoride or hydrogen fluoride | Method 13 A or B of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      0.17 lb/hr of particulate matter

0.74 tons/yr particulate matter

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results by the number hours the emissions unit operated during the year.

b. Emission Limitation:

0.31 lb/hr of nitrogen oxides
1.36 tons/yr nitrogen oxides

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 7 or 7E, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year nitrogen oxides emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 7 test results by the number hours the emissions unit operated during the year.

c. Emission Limitation:

0.04 lb/hr of fluoride, or hydrogen fluoride
0.18 ton/yr of fluoride, or hydrogen fluoride

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 13 A or B, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year fluoride, or hydrogen fluoride emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 13 test results by the number hours the emissions unit operated during the year.

d. Emission Limitation:

0.50 lb/hr of volatile organic compounds
2.19 ton/yr of volatile organic compounds

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 25 or 25A, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year organic compound emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 25 or 25A stack test results by the number of hours the emissions unit operated during the year.

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

f. Emission Limitation:

0.82 Lb/Hr Carbon Monoxide (Products of Combustion)
3.61 Tons/Yr Carbon Monoxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.00908 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

g. Emission Limitation:

0.006 Lb/Hr Sulfur Dioxide (Products of Combustion)

0.03Tons/Yr Sulfur Dioxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.00908 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | |
|---|---|---|
| P905 - Natural gas fired Aluminum Revererator Furnace, 4 MMBtu heat input capacity and 0.52 tons per hour melt capacity. Known as Furnace # 5. | OAC rule 3745-31-05(A)(3) | |
| This emissions unit is not controlled, and has both fugitive and stack emissions. The emissions from this emissions unit are believed to be split 50/50 between fugitive and stack. | | OAC rule 3745-17-07(A)(1) |
| This emissions unit feeds molten aluminum to 2 floor molds. | | OAC rule 3745-17-11(B) |
| (Modified) | | |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.54 Pound/Hr Nitrogen Oxides<br>2.37 Tons/Yr Nitrogen Oxides | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.87 Pound/Hr Volatile Organic Compounds<br>3.81 Ton/Yr Volatile Organic Compounds | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 0.06 Pound/Hr Fluoride or Hydrogen Fluoride<br>0.26 Ton/Yr Fluoride or Hydrogen Fluoride | |
| 0.30 Pounds/Hr Particulate Matter<br>1.31 tons/Yr. Particulate Matter | |
| 0.002 Lb/Hr Sulfur Dioxide<br>0.01 Tons/Yr Sulfur Dioxide | |
| 0.33 Lbs/Hr Carbon Monoxide<br>1.45 Tons/Yr Carbon Monoxide | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. | |
| Visible particulate emissions from the stack shall not exceed five percent opacity, as a three-minute average. | |
| Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.a through A.2.e) | |

Emissions Unit ID: **P905**

**2. Additional Terms and Conditions**

**2.a** This facility is not located in an appendix A area, therefore paragraph B of OAC rule 3745-17-08 does not apply. However, as a condition of Best Available Technology, the Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall minimize or eliminate visible particulate emissions of fugitive dust by employing best available control measures. These measures shall include, but not be limited to, the following:

i. The installation and use of hoods, fans and other equipment to adequately enclose, contain, capture and vent the fugitive dust; and

ii. The collection efficiency is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below. Ohio EPA may require additional control measures at any or all operations described above if deemed necessary based on observed visible emissions.

**2.c** For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.

**2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.

**2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).

## B. Operational Restrictions

1. The permittee shall only fire natural gas as fuel in this emissions unit.

2. The aluminum melting furnace shall be charged with clean, ingots, bar stock, dry, sawed-off pieces of solid aluminum, aluminum chips and turnings from machining. Materials bearing oil, grease, paint, or paper shall not be employed.

3. Chlorine shall not be added for demagging the aluminum.

4. Alloying, if any performed in this emissions unit shall be done employing only clean materials.

5. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

a. identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

b. visible emissions in excess of 5 percent opacity; and

c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

5. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates, nitrogen oxides, fluoride or hydrogen fluoride, and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |
| nitrogen oxides | Method 7 or 7E of 40 CFR Part 60, Appendix A |
| fluoride or hydrogen fluoride | Method 13 A ro B of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      0.30 lb/hr of particulate matter
      1.31 tons/Yr. particulate matter

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results by the number hours the emissions unit operated during the year.

b. Emission Limitation:

0.54 lb/hr. of nitrogen oxides
2.37 tons/yr nitrogen oxides

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 7, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year NOx emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 7 test results by the number hours the emissions unit operated during the year.

c. Emission Limitation:

0.06 lb/hr of fluoride, or hydrogen fluoride
0.26 ton/Yr of fluoride, or hydrogen fluoride

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Emissions Unit ID: **P905**

Compliance with the tons per year fluoride, or hydrogen fluoride emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 13 test results by the number hours the emissions unit operated during the year.

d. Emission Limitation:

0.87 lb/hr of volatile organic compounds
3.81 tpy of volatile organic compounds

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 25 or 25A, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year organic compound emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 25 or 25A stack test results by the number of hours the emissions unit operated during the year.

e. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

f. Emission Limitation:

0.33 Lb/Hr Carbon Monoxide (Products of Combustion)
1.45 Tons/Yr Carbon Monoxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0039 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

g. Emission Limitation:

0.002 Lb/Hr Sulfur Dioxide (Products of Combustion)
0.01 Tons/Yr Sulfur Dioxide (Products of Combustion)

Applicable Compliance Method:

Compliance with the Lb/Hr emission limitation shall be determined by multiplying the maximum input capacity (0.0039 MMCF/Hr) of the burnout oven by the AP-42 emission factor for the combustion of natural gas. Compliance with the Tons/Yr limitation shall be determined by multiplying the short term limitation by 8760 hours per year and dividing by 2000 to convert to tons per year.

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | OAC rule 3745-17-07(A)(1) |
|---|---|---|
| P906 - 15 Casting and knock out stations**.** Air hammers removing sand from castings.<br><br>The emissions are enclosed within cabinets which have an estimated capture efficiency of 95%. The captured emissions are vented to cartridge filters which have a estimated control efficiency of 98%.<br><br>Overall control efficiency 93%.<br><br>(Modified) | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-11 |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| | emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 12.10 Pound/Hr Volatile Organic Compounds<br>30.35 Tons/Yr Volatile Organic Compounds | |
| 0.76 Pounds/Hr Particulate Matter<br>3.33 Tons/Yr Particulate Matter | |
| 0.14 pound per hour phenol<br>0.61 ton per year phenol | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. | |
| Stack particulate emissions shall not exceed 0.01 grain per dry standard cubic foot of exhaust gas or no visible particulate emissions from the control device stack exhaust stack, (whichever is less stringent). See 2.a. below. | |
| The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). | |
| The emission limitation specified by this rule is less stringent than the | |

Emissions Unit ID: **P906**

**2. Additional Terms and Conditions**

**2.a** The Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

## B. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 - 8 inches water.

2. All particulate emissions captured from this emissions unit shall be vented to the cartridge filters.

3. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

   e. any corrective actions taken to eliminate the abnormal visible emissions.

2. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be

employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

3. The permittee shall properly install, 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 recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

4. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

5. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

   a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

   b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

   c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

   d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

   e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which:

   a. Identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit;

b. Visible emissions in excess of 5 percent opacity; and

c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.

2. If no visible emissions exceeded 5 percent opacity, and no unusual visible emissions were observed during the reporting period, the permittee shall submit a report which states no visible emissions exceeding 5 percent opacity, and no unusual visible emissions were observed during the reporting period.

3. 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 above. These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no deviations occurred during the period a negative declaration shall be submitted.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

5. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

6. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.76 lbs/hr of particulate matter
1.90 tons/Yr. particulate matter

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the pound per ton metal processed emission rate obtained from the Method 5 test results by the annual production limitation, 1 minus overall control efficiency, and dividing by 2000. .

b. Emission Limitation:

12.10 lb/hr of volatile organic compounds
30.35 ons/yr of volatile organic compounds

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be obtained by stack testing in accordance with method 25 or 25A, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year organic compound emission limitation shall be demonstrated by multiplying the emission rate obtained from the Method 25 or 25A stack test results by the annual production limitation of 17,000 tons metal and dividing by 2000.

c. Emission Limitation:

5% opacity as a 3-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary

because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

## 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 | Applicable Rules/Requirements | |
|---|---|---|
| P907 - Foundry core sand reclamation unit, consisting of the sand reclaimer, conveyors, hoppers, screen vibrator and elevator. | OAC rule 3745-31-05(A)(3) | |
| | | OAC rule 3745-17-07(A)(1) |
| The emissions are enclosed with an estimated capture efficiency of 99%. The captured emissions are vented to the south bag house which has an estimated control efficiency of 98%. | | |
| | | OAC rule 3745-17-11(B) |
| Overall control efficiency 97%. | | |
| This emissions unit receives and processes core sand for the entire facility. | | |
| (Modified) | | |

| Applicable Emissions Limitations/Control Measures | |
|---|---|
| 0.32 pounds per hour particulate matter.<br><br>1.40 tons per year Particulate matter | pursuant to OAC rule 3745-31-05(A)(3).<br><br>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 8.70 pounds per hour volatile organic compounds.<br>24.65 tons per year volatile organic compounds. | |
| 0.005 pounds per hour phenol<br>0.02 tons per year phenol | |
| 3.66 Lb/Hr Sulfur Dioxide<br>16.03 Tons/Yr Sulfur Dioxide | |
| 2.22 Lbs/Hr Carbon Monoxide<br>9.72 Tons/Yr Carbon Monoxide | |
| Stack particulate emissions shall not exceed 0.01 grain per dry standard cubic foot of exhaust gas or no visible particulate emissions from the control device stack exhaust stack, (whichever is less stringent). | |
| Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. See 2.a. below. | |
| The emission limitation specified by this rule is less stringent than the emission limitation established | |

**2. Additional Terms and Conditions**

**2.a** The Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

## B. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 - 8 inches water.

2. All particulate emissions captured from this emissions unit shall be vented to the fabric filter.

3. The permittee shall only fire natural gas as fuel in this emissions unit.

4. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Record keeping Requirements

1. The permittee shall properly install, 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

recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any abnormal visible emission incident; and

   e. any corrective actions taken to eliminate the abnormal visible emissions.

3. If any visible emissions in excess of 5 percent opacity are observed, corrective actions shall be employed to eliminate any visible emissions in excess of 5 percent opacity, these actions shall also be noted in the operations log.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

   a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

   b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

   c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

   d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

5. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

## 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 above.

2. The permittee shall submit semiannual written reports which:

   a. Identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and

   b. Visible emissions in excess of 5 percent opacity

   c. describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions, or visible emissions greater than 5 percent opacity.

   These reports shall be submitted to the Akron Regional Air Quality Management District (ARAQMD) by January 31 and July 31 of each year and shall cover the previous 6-month period. If no abnormal visible fugitive particulate emissions were observed during the period a negative declaration shall be submitted.]

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

5. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

6. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance

with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates, phenols, and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |
| Phenol | Method 18 of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District

Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.32 lbs/hr of particulate matter
1.40 tons/Yr. particulate matter

Applicable Compliance Method:

Multiply the particulate emission factor of 3.60 pound of particulate emissions per ton of sand processed by the maximum hourly rate of sand processed, then multiply by (1 minus overall control eff). This particulate emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

b. Emission Limitation:

0.01 grain particulate matter per dscf

Applicable Compliance Method:

Compliance shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results and multiplying them by the number hours the emissions unit operated during the year.

c. Emission Limitation:

0.005 lb/hr of Phenol
0.02 tons/yr of Phenol

Applicable Compliance Method:

Multiply the phenol emission factor of 0.00154 pound of phenol per ton of aluminum melted in the furnace by the total amount of aluminum melted in the furnace. This phenol emission factor was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

d. Emission Limitation:

8.70 lb/hr of volatile organic compounds
24.65 tons/yr of volatile organic compounds

Applicable Compliance Method:

For lb/hr volatile organic compounds, multiply the volatile organic compounds emission factor obtained during the emission test in pounds of VOC per ton of sand processed in the emissions unit by the maximum rated capacity (3.00 tons/hr) of sand processed in the emissions unit. For tons/yr volatile organic compounds, multiply the volatile organic compounds emissions factor obtained during the emissions test in pounds of VOC per ton sand processed in the emissions unit by the annual throughput restriction of 17,000 tons sand and divide by 2000.

e. Emission Limitation:

5 % opacity as a 3-minute average of fugitive emissions

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

f. Emission Limitation:

no visible particulate emissions from the control device exhaust stack

Applicable Compliance Method:

OAC rule 3745-17-03(B)(4)

## F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

Emissions Unit ID: **P908**

## 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 | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| P908 - Sand break down line, consisting of five belt conveyors, elevators a surge hopper, three vibra mills, and two sixty ton silos. | OAC rule 3745-31-05(A)(3) | 0.58 pounds per hour particulates matter.<br><br>2.54 tons per year Particulate matter |
| The emissions are enclosed with an estimated capture efficiency of 99% . The captured emissions are vented to the north bag house which has an estimated control efficiency of 98%.<br><br>Overall control efficiency 97%. | | Stack particulate emissions shall not exceed 0.01 grain per dry standard cubic foot of exhaust gas or no visible particulate emissions from the control device stack exhaust stack, (whichever is less stringent).<br><br>Visible particulate emissions of fugitive dust shall not exceed five percent opacity, as a three-minute average, except as specified by rule. See 2.a. below. |
| This emissions unit receives and processes sand from the knock out stations.<br><br>(Modified) | OAC rule 3745-17-07(A)(1) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule |

3745-31-05(A)(3).

**2. Additional Terms and Conditions**

**2.a** The Permittee shall employ control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

## B. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 - 8 inches water.
2. All particulate emissions captured from this emissions unit shall be vented to the fabric filter.

## C. Monitoring and/or Record keeping Requirements

1. The permittee shall properly install, 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 recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

2. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

## 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 above.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |

If applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. 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 appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

5. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.58 pounds per hour particulates matter.

2.54 Tons per year Particulate matter

Applicable Compliance Method:

Multiply the particulate emission factor of 3.60 pound of particulate emissions per ton of sand processed by the maximum hourly rate of sand processed, then multiply by (1 minus

overall control eff). This particulate emission factors was supplied by RMT Inc. Consultants for the permittee and was based on air testing at similar sources.

b. Emission Limitation:

0.01 grain particulate matter per dscf

Applicable Compliance Method:

Compliance shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results and multiplying them by the number hours the emissions unit operated during the year.

c. Emission Limitation:

5 % opacity as a 3-minute average of fugitive emissions

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

d. Emission Limitation:

no visible particulate emissions from the control device exhaust stack

Applicable Compliance Method:

OAC rule 3745-17-03(B)(4)

## F. Miscellaneous Requirements

None

Emissions Unit ID: **P909, and P911 thru P919**

## 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 | | Applicable Rules/Requirements |
|---|---|---|
| P909, and P911 through P919 - 10 cold box core machines, using sand and Isoset with a SO2 reactant. Core making operations consist of a day silo, heater/cooler, elevators, ten hoppers, 10 core machines, a mixer and conveyors.<br><br>The particulate emissions are enclosed with an estimated capture efficiency of 99%. The captured emissions are vented to the south bag house which has an estimated control efficiency of 98%.<br><br>Overall control efficiency 97%.<br><br>The $SO_2$ emissions are enclosed by the core machines with an estimated capture efficiency of 99%. The captured emissions are vented to a $SO_2$ scrubber which has an estimated control efficiency of 98%. | Overall control efficiency 97%.<br><br>Each of core making machines listed above produces cores for the entire facility.<br><br>(Modified) | OAC rule 3745-31-05(A)(3)<br><br>OAC rule 3745-17-07(A)(1) |

Emissions Unit ID: **P909, and P911 thru P919**

| | Applicable Emissions Limitations/Control Measures | Exempt per OAC rule 3745-21-07(G)(9)(h), see the requirements of OAC rule 3745-31-05(A)(3). |
|---|---|---|
| OAC rule 3745-17-11(B) | Total emissions for the ten emissions units shall not exceed the following.<br>0.12 pounds per hour particulate matter. (total fugitive and stack).<br>0.53 tons per year particulate matter | |
| OAC Rule 3745-21-07(G) | 5.52 pounds per hour volatile organic compounds. (5.48 lbs/hr stack)<br>7.82 tons per year volatile organic compounds.<br><br>1.23 pounds per hour sulfur dioxide (total fugitive and stack)<br>5.39 tons per year sulfur dioxide.<br><br>Stack particulate emissions shall not exceed 0.01 grain per dry standard cubic foot of exhaust gas or no visible particulate emissions from the control device stack exhaust stack.<br><br>See A.2.a. and F.2 below.<br><br>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).<br><br>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). | |

**2. Additional Terms and Conditions**

**2.a** The Permittee shall employ best available technology that is sufficient to minimize or eliminate visible emissions of fugitive dust.

## B. Operational Restrictions

1. The pressure drop across the baghouse serving emissions units P909 and P911 through P919 shall be maintained within the range of 1 - 8 inches water.

2. All particulate emissions captured from emissions units P909 and P911 through P919 shall be vented to the fabric filter.

3. The permittee shall use best engineering practices available to ensure the majority of $SO_2$ emissions are captured and vented serving emissions units P909 and P911 through P919 to a sulfur dioxide scrubber with 98% control efficiency.

4. The pH of the scrubber liquor of the SO2 scrubber serving emissions units P909 and P911 through P919 shall be maintained within the range of greater than 6.0.

5. The permittee desires to restrict emissions of volatile organic compounds (VOCs) to less than 95.8 tons based upon a per rolling 12-month summation of the monthly period VOC emissions to avoid Title V permitting requirements. In order to restrict emissions to below Title V applicability thresholds, the permittee has agreed to maximum operational restrictions of 17,000 tons aluminum charged based upon a per rolling twelve month summation of the monthly periods for emissions units F001, F002, F003, P901, P902, P903, P904, P905, and P906, and 17,000 tons sand handled based upon a per rolling twelve month summation of the monthly periods for emissions units P907, P909, P911, P912, P913, P914, P915, P916, P917, P918,and P919.. The permittee has on hand sufficient records to begin calculating and tracking this rolling restriction upon issuance of this permit and therefore the permittee does not need to be limited to monthly amounts of aluminum charged or sand handled the first year.

## C. Monitoring and/or Record keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse serving emissions units P909 and P911 through P919 while these emissions units are in operation. 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 baghouse serving emissions units P909 and P911 through P919 on a daily basis.

2. The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor of the SO2 scrubber serving emissions units P909 and P911 through P919 while these emissions units are in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each day:

   a. The pH of the scrubber liquor, on a per shift basis.

   b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

3. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

4. For the purpose of evaluating compliance with the established annual operating and VOC twelve month restrictions in Part II, Section B., the permittee shall collect and record the following information on a monthly basis:

   a. Total quantity of aluminum charged in all aluminum reverb furnaces designated as emissions units P901 through P905, in tons;

   b. Total quantity of sand charged or handled in the sand reclaimer designated as emissions unit P907, in tons;

   c. The rolling, twelve month summation of aluminum charged in emissions units P901 through P905, in tons;

   d. The rolling, twelve month summation of sand charged or handled in emissions unit P907, in tons;

   e. The rolling, twelve month summation of VOC emissions from emissions units F001, F002, F003, P001, P901, P902, P903, P904, P905, P906, P907, P909, P911, P912, P913, P914, P915, P916, P917, P918, and P919.

## 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 serving emissions units P909 and P911

through P919 did not comply with the allowable range specified above.

2. The permittee shall submit pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH of the SO2 scrubber serving emissions units P909 and P911 through P919 did not comply with the pH requirements specified above.

3. The permittee shall submit semiannual written reports which (a) identify all days during which any of the above mentioned excursions occurred, (b) describe any corrective actions taken to eliminate the abnormal condition. These reports shall be submitted to the Akron Regional Air Quality Management District by January 31 and July 31 of each year and shall cover the previous 6-month period. If no deviation/excursion has occurred in a reporting period a negative declaration shall be submitted by the appropriate date.

4. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month aluminum charge and/or sand handled exceeded 17,000 tons.

5. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each monthly record for which the rolling twelve month summation of VOC emissions exceeded 95.8 tons.

6. Deviation reports shall be submitted in accordance with the General Terms and Conditions, Part I Section A.2.

## E. Testing Requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 3 months after issuance of the permit. Note that testing was conducted 10/01 after issuance of the initial permit on 6/19/01. Testing is not required for this permit modification.

2. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulates, sulfur dioxide, and volatile organic compounds.

3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

| Pollutant | USEPA Approved Test Method |
|---|---|

| | |
|---|---|
| particulates | Method 5 of 40 CFR Part 60, Appendix A |
| sulfur dioxide | Method 6 of 40 CFR Part 60, Appendix A |
| volatile organic compounds | Method 25 or 25A of 40 CFR Part 60, Appendix A |

If applicable, alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

4. The sulfur dioxide control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures (or the approved alternative test protocol) as approved by the appropriate Ohio EPA District Office or local air agency.

5. 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 appropriate Ohio EPA District Office or local air agency.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

6. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Stack Emission Limitation Serving Emissions Units P909 and P911 thru P919:

0.01 grains particulate matter per dscf
0.53 tons/yr. particulate matter

Applicable Compliance Method:

Compliance shall be obtained by stack testing in accordance with method 5, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year particulate emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 5 test results and multiplying them by the number hours the emissions unit operated during the year.

b. Stack Emission Limitation Serving Emissions Units P909 and P911 thru P919:

1.23 lbs/hr of sulfur dioxide
5.39 ton/yr sulfur dioxide

Applicable Compliance Method:

Compliance shall be obtained by stack testing in accordance with method 6, 40 CFR 60, Appendix A, as required by sections E.1 through E.4 of this permit. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA if necessary.

Compliance with the tons per year sulfur dioxide emission limitation shall be demonstrated by multiplying the average hourly emission rate obtained from the Method 6 test results and multiplying them by the number hours the emissions unit operated during the year.

c. Stack Emission Limitation Serving Emissions Units P909 and P911 thru P919:

5.52 lb/hr of volatile organic compounds
7.82 tons/yr of volatile organic compounds

Applicable Compliance Method:

For lb/hr volatile organic compounds, multiply the volatile organic compounds emission factor obtained during the emission test in pounds of VOC per ton of sand processed in the emissions unit by the total amount of sand recovered.

For tons/yr volatile organic compounds, multiply the volatile organic compounds emission factor obtained during the emission test in pounds of VOC per ton of sand processed in the emissions unit by the annual operational restriction of 17,000 tons sand and divide by 2000.

d. Fugitive Emission Limitation Associated with Emissions Units P909 and P911 thru P919:

5 % opacity as a 3-minute average of fugitive emissions

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

e. Stack Emission Limitation Serving Emissions Units P909 and P911 thru P919:

no visible particulate emissions from the control device exhaust stack

Applicable Compliance Method:

OAC rule 3745-17-03(B)(4)

## F. Miscellaneous Requirements

None

## 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 | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| P910 - Sand blast operation in an enclosed cabinet. | OAC rule 3745-31-05(A)(3) | 1.36 tons particulate matter per year. |
| (Modified) | | 0.31 pounds particulate matter per hour. |
| | | No Visible emissions from the enclosure or the cartridge filter. See 2.a. below. |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |

**2. Additional Terms and Conditions**

**2.a** The Permittee shall employ best available technology that is sufficient to minimize or eliminate visible emissions of fugitive dust

### B. Operational Restrictions

1. This emission unit shall only be operated with the enclosure closed, and the cartridge filters(s) in place.

2. The blasting media used in this emissions unit, shall be a non-silica based material.

## C. Monitoring and/or Record keeping Requirements

1. The permittee shall perform Daily checks, when the emissions unit is in operation, for any visible fugitive particulate emissions escaping from 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 total duration of the visible emission incident; and

b. any corrective actions taken to eliminate the abnormal visible emissions.

2. The hourly and annual emission limitations outlined in Part II Section A.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

## D. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the containment of this emissions unit and (b) describe any corrective actions taken to eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Akron Regional Air Quality Management District by January 31 and July 31 of each year and shall cover the previous 6-month period.

## 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:

0.31 pounds particulate matter per hour, and
1.36 tons particulate matter per year.

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

Lbs PE/hr = (A) x (B) x (1 - C) + (A) x (B) x(C) x (1-D)

where:
A = particulate emission factor of 15.5 pounds per ton of iron castings throughput, from Bernard S. Gutow Article, Modern Castings, January 1972;

B = hourly media usage rate, tons of sand media; and
c = percent capture efficiency use 99% (supplied by RMT consultants unless actual efficiency is available from stack test data.
D = control efficiency of fabric filter (use 99% control), except if actual efficiency is available from stack test data)

b. Emission Limitation:

No Visible emission

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

## F. Miscellaneous Requirements

None