Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

6/21/2016

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Mr. Mike Chenoweth
Imperial Aluminum - Minerva, LLC
217 Roosevelt Ave.
Minerva, OH 44657

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0210000107
Permit Number: P0120901
Permit Type: Renewal
County: Carroll

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**
- **What should you do if you notice a spill or environmental emergency?**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Ohio EPA DAPC, Northeast District Office at (330)963-1200 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: Ohio EPA-NEDO

Ohio Environmental Protection Agency

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
Imperial Aluminum - Minerva, LLC

Facility ID:	0210000107
Permit Number:	P0120901
Permit Type:	Renewal
Issued:	6/21/2016
Effective:	6/21/2016
Expiration:	6/21/2026

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install and Operate
for
Imperial Aluminum - Minerva, LLC

Table of Contents

Authorization 1

A. Standard Terms and Conditions 3

1. What does this permit-to-install and operate ("PTIO") allow me to do? 4
2. Who is responsible for complying with this permit? 4
3. What records must I keep under this permit? 4
4. What are my permit fees and when do I pay them? 4
5. When does my PTIO expire, and when do I need to submit my renewal application? 4
6. What happens to this permit if my project is delayed or I do not install or modify my source? 5
7. What reports must I submit under this permit? 5
8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit? 5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? 5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? 6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? 6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? 6
13. Can I transfer this permit to a new owner or operator? 7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? 7
15. What happens if a portion of this permit is determined to be invalid? 7

B. Facility-Wide Terms and Conditions 8

C. Emissions Unit Terms and Conditions 11

1. F001, Dross Handling 12
2. P004, Rotary Furnace #1 20
3. P006, Rotary Furnace #2 34
4. P010, Reverberatory Furnace 48

Authorization

Facility ID:	0210000107
Application Number(s):	A0055814
Permit Number:	P0120901
Permit Description:	Renewal FEPTIO for a secondary aluminum foundry.
Permit Type:	Renewal
Permit Fee:	$0.00
Issue Date:	6/21/2016
Effective Date:	6/21/2016
Expiration Date:	6/21/2026

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Imperial Aluminum - Minerva, LLC
217 ROOSEVELT AVE
Minerva, OH 44657

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)963-1200

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s))listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0120901
Permit Description: Renewal FEPTIO for a secondary aluminum foundry.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**F001**
Company Equipment ID:	Dross Handling
Superseded Permit Number:	P0109677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P004**
Company Equipment ID:	Rotary Furnace #1
Superseded Permit Number:	P0109256
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P006**
Company Equipment ID:	Rotary Furnace #2
Superseded Permit Number:	P0109256
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P010**
Company Equipment ID:	Reverberatory Furnace
Superseded Permit Number:	P0109256
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee.This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee.Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as beingpermanently shut down without first applying for and obtaining a permit pursuantto OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) B.2, B.3, B.4, B.5, and B.6

2. Allowable Facility-Wide Emission Limitations

   a) The facility-wide hydrogen chloride (HCl) emissions shall not exceed 2.1 pounds per hour from emissions units P004, P006 and P010, combined.

   b) The facility-wide HCl emissions shall not exceed 9.21 tons per year, as a rolling, 12-month summation, from emissions units P004, P006 and P010, combined.

3. Operational Restrictions

   a) None.

4. Monitoring and/or Recordkeeping Requirements

   a) None.

5. Reporting Requirements

   a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Northeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

   b) The permittee shall submit semiannual excursion reports to the Ohio EPA Northeast District Office within 60 days after the end of each 6-month period. The 6-month reporting periods shall

be January 1 to June 30, and July 1 to December 31 of each calendar year. These reports shall report if any of the following conditions occurred during a 6-month period:

(1) any exceedance of the facility-wide HCl emission limitation of 9.21 tons per year, as a rolling, 12-month summation, from emissions units P004, P006 and P010, combined.

If there are no deviations or exceedances, the permittee shall report that no exceedances occurred during the 6-month period.

6. Testing Requirements

a) Compliance with the Emissions Limitations and/or Control Requirements specified in sections B.2.a) and B.2.b) of these terms and conditions shall be determined in accordance with the following methods:

(1) Emission Limitations:

The facility-wide HCl emissions shall not exceed 2.1 pounds per hour from emissions units P004, P006 and P010, combined.

The facility-wide HCl emissions shall not exceed 9.21 tons per year, as a rolling, 12-month summation, from emissions units P004, P006 and P010, combined.

Applicable Compliance Methods:

Compliance with the facility-wide hourly emission limitation shall be demonstrated based upon summing the results of the most recent emissions stack testing results performed for emissions units P004, P006, and P010, in accordance with the methods and procedures specified in C.2.f)(2), C.3.f)(2) and C.4.f)(2).

The annual emission limitation was developed by multiplying the short-term facility wide combined allowable HCl emission limitation (2.10 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

C. Emissions Unit Terms and Conditions

1. F001, Dross Handling

Operations, Property and/or Equipment Description:

Dross Cooling, Storage and Loading

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Fugitive particulate emissions (PE) from the dross cooling shall not exceed 2.69 tons per year. See b)(2)a. PE from dross truck loading shall not exceed 0.9 pound per truck loaded and 1.17 tons per year. See b)(2)b.
b.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule, for truck loading.
c.	OAC rule 3745-17-07(B)(1)	Visible PE of fugitive dust shall not exceed 20% opacity, as a 3-minute average, for dross cooling.
d.	OAC rule 3745-17-08(B)(7)	See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The permittee shall keep all dross materials dry and under adequate cover, except when these dross materials are being moved to the dross storage area or when loading the dross to trucks.

b. This permit takes into account the use of a fabric filter/baghouse. Emissions from the dross truck loading shall be vented to the fabric filter/baghouse control device whenever this air contaminant source is in operation. The fabric filter/baghouse shall maintain a minimum of 90% capture efficiency and 95% control efficiency at all times during operation.

c. The permittee shall cover, at all times, any open bodied vehicles when transporting materials that are likely to become airborne.

c) Operational Restrictions

(1) The fabric filter/baghouse shall be in operation while the dross truck loading is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 2.0 to 12.0 inches of water.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the fabric filter/baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the fabric filter/baghouse on a continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the fabric filter/baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

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

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

e. any corrective actions taken to minimize or eliminate the visible emissions.

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

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

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

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

e. any corrective actions taken to minimize or eliminate the visible emissions.

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

e) Reporting Requirements

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

(2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the fabric filter/baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. each period of time (start time and date, and end time and date) when the pressure drop across the fabric filter/baghouse was outside of the range specified in d)(2) above and outside of the acceptable range following any required compliance demonstration;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the fabric filter/baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this

permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(5) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Northeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation</u>:

PE from dross truck loading shall not exceed 0.9 pound per truck loaded.

<u>Applicable Compliance Method</u>:

Compliance shall be demonstrated using the following equation:

PET = [6.0 pounds/truck loaded] x [1 - (CPE x CE)]

where:

PET = pounds PE per truck loaded;

pounds/truck loaded = engineering estimate of uncontrolled PE generated from truck loading;

CPE = capture efficiency of the fabric filter/baghouse, which is estimated to be 90%; and

CE = control efficiency of the baghouse, which is estimated to be 95%.

b. <u>Emission Limitation</u>:

PE from dross truck loading shall not exceed 1.17 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated using the following equation:

tons/year = [PET] x [2600 trucks/year] x [1 ton/2000 pounds]

where:

tons/year = tons PE per year from truck loading;

PET = pounds PE per truck loaded; and

2600 = maximum number of trucks loaded with dross per year.

c. Emission Limitation:

Fugitive PE from the dross cooling shall not exceed 2.69 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated using the following equation:

PE = [24,500 tons aluminum produced/year] x [EF] x [(1-0.51)] x [1 ton/2000 pounds]

where:

PE = tons PE per year;

EF = emission factor of 0.22 pound/ton aluminum produced, from RACM, Table 2.11-1; and

0.51 = estimated % PE control efficiency of building capture and pot design.

d. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule, for truck loading.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitation:

Visible PE of fugitive dust shall not exceed 20% opacity, as a 3-minute average, for dross cooling.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.

2. P004, Rotary Furnace #1

Operations, Property and/or Equipment Description:

Rotary Tilting Melting Furnace #1 utilizing oxyfuel, controlled by baghouse #6 (Haberny #1). Baghouse #4 (Sly #4) is the backup baghouse.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(14), d)(15), d)(16), d)(17) and e)(5)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b., c)(2), d)(8) and f)(2)d.ii.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<u>Process Emissions</u>: Particulate emissions (PE) shall not exceed 3.00 pounds per hour and 13.14 tons per year. Hydrogen fluoride (HF) emissions shall not exceed 0.30 pound per hour and 1.31 tons per year. Visible PE shall not exceed 10% opacity, as a 6-minute average, at any time. <u>Products of Combustion</u>: Carbon monoxide (CO) emissions shall not exceed 0.41 pound per hour and 1.80 tons per year.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Compliance with 40 CFR Part 63, Subpart RRR
b.	OAC rule 3745-31-05(D)(1)(b)	See B.2. through B.6. and b)(2)h.
c.	40 CFR Part 63, Subpart RRR	Dioxins and Furans (D/F) emissions shall not exceed 2.1E-04 grain D/F TEQ per ton of feed or charge and 7.7E-07 tpy. See b)(2)a., b)(2)b., b)(2)c., b)(2)d., b)(2)e., b)(2)f., b)(2)g., c)(1), c)(2) and c)(3).
d.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations required by these applicable rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. Section 63.1503 of 40 CFR Part 63, Subpart RRR defines TEQ as the international method of expressing toxicity equivalents for dioxins and furans as defined in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and - Dibenzofurans (CDDs and CDFs) and 1989 Update” (EPA-625/3-89-016).

b. This emissions unit (P004) is a Group 1 furnace as defined by 40 CFR Part 63, Subpart RRR. This furnace melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing. This furnace may employ 2-6% aluminum fluoride or 1-5% cryolite as a cover flux, and Potassium Aluminum Fluoride as a demagging flux. This 7.0 - 10 mmBtu/hour rotary tilting furnace fires with oxyfuel. The furnace is equipped with a collection system consisting of a canopy hood and duct work, a dust dropout box, and a 35,000 cfm designed, 3-compartment, negative pressure baghouse with hydrated lime injection and a shaker cleaning mechanism. The baghouse operation is monitored using a triboelectric bag leak detection system. There is no sidewell on the furnace. This is not an in-line fluxer. The permit application reports the maximum aluminum scrap charge as 8,649 pounds per hour or 4.32 tons per hour, the maximum cover flux feed rate as 1,895 pounds per hour, the maximum Potassium Aluminum Fluoride feed rate as 343 pounds per hour, and the total charge/feed as 10,887 pounds per hour or 5.44 tons per hour. Note: The actual maximum operating parameters will be set by the most recent performance test which demonstrates compliance with all applicable emission limitations.

c. The permittee must provide and maintain easily visible labels posted at this emissions unit that identifies the applicable emission limits and means of compliance, including the type of emissions unit (e.g. group 1 furnace) and the

applicable operational standards and control methods (work practice or control device). This includes, but is not limited to, the type of charge to be used (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operation, Maintenance and Management (OM&M) Plan.

d. The permittee shall employ a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice." or appropriate chapters of Industrial Ventilation: A Manual of Recommended Practice for Design 27th edition. The permittee has conducted an evaluation of the capture and collection system for this furnace and modified the system accordingly.

e. For the bag leak detection system, the permittee shall initiate corrective action within 1 hour of a bag leak detection system alarm. The fabric filter system shall be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period.

In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective action.

f. This emissions unit shall be operated in accordance with the most current OM&M Plan and most current Startup, Shutdown and Malfunction Plan (SSMP).

g. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M Plan, the owner or operator must initiate corrective action. Corrective actions must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the most recent performance test and steps to prevent the likely recurrence of the cause of a deviation.

h. The permittee shall use hydrated lime in Baghouse No. 6 serving this emissions unit or Sly #3 at the rate set during the most recent performance test which demonstrates compliance with all emission limitations, and which demonstrates that the HCl emissions from the facility are less than 10 tons per year. Baghouse #4 (Sly #3) is the backup baghouse.

c) Operational Restrictions

(1) The permittee shall maintain the 3-hour block average inlet temperature for the fabric filter at or below the average temperature established during the most recent performance test which demonstrated compliance with the applicable emission limitations, plus 25 degree Fahrenheit.

(2) For the lime injection system, the permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the most recent performance testing which demonstrated compliance with the applicable emission limitations.

(3) The permittee shall maintain the total cover flux and demagging (Potassium Aluminum Fluoride) fluxing rates for each operating cycle or time period used in the most recent performance test which demonstrated compliance with the applicable emission limitations at or below the average rates established during the performance test.

(4) The values for the parameters required in c)(1), c)(2) and c)(3) above, that are established during the most recent performance test which demonstrates compliance with the applicable emission limitations, shall be included as revisions to the OM&M Plan.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain equipment to continuously monitor and record the pressure drop across the baghouse during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee currently monitors and records the pressure drop continuously via the Programmable Logic Controller (PLC).

(2) Whenever the monitored value for the pressure drop deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the

need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The pressure drop shall be maintained within the range of 2 to 12 inches of water.

This range is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(3) The permittee shall collect and record the following information for each day for the control equipment:

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

(4) The permittee must inspect the labels for this emissions unit at least once per calendar month to confirm that posted labels as required by b)(2)c. are intact and legible.

(5) To determine the feed/charge rate, the permittee must calibrate, operate and maintain a device to measure and record the total weight of feed/charge to the emissions unit over the same operating cycle or time period used during the most recent performance test which demonstrated compliance with the applicable emission limitations.

(6) The feed/charge rate shall be recorded using a scale and a recorder, with calibration of the scale at least once every 6-month period to $\pm$ 1% accuracy. The feed/charge must be measured and recorded on an emission unit-by-emission unit basis. The permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(7) The permittee must calculate and record the 3-day, 24-hour rolling average emissions of D/F for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the owner or operator must:

a. calculate and record the total weight of material charged to each emissions unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required above.

b. multiply the total feed /charge weight to the emissions unit for the 24-hour period (in lbs/ton of feed/charge) by the emission rate for that emission unit (as determined during the most recent performance test that demonstrated compliance) to provide emissions for each emission unit for the 24-hour period, in pounds.

(8) The permittee must operate and maintain on a continuous basis a bag leak detection system as required below or a continuous opacity monitoring system as required in 40 CFR Part 63, Subpart RRR. Following initial adjustment of the system, the permittee must not adjust the sensitivity or range, averaging period, alarm set points or alarm delay time except as detailed in the OM&M Plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

(9) For the fabric filter inlet temperature, the permittee shall calibrate, maintain and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in Subparts A and RRR of 40 CFR Part 63. The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.

(10) To verify that lime is always free-flowing in the continuous lime injection system the permittee shall inspect each feed hopper or silo at least once each 8-hour period and record the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the permittee must increase the frequency of inspections to at least once every 4-hour period over the next 3 days. The permittee may return to inspections at least once every 8-hour period if corrective action results in no further blockages of lime during the 3-day period.

The permittee has requested and received approval to install, operate and maintain a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. Alternatively, the permittee may operate this system to determine the lime is free-flowing in the continuous lime injection system.

If lime is found not to be free-flowing, the permittee must promptly initiate and complete corrective action. The permittee must record the lime feeder setting once each day of operation.

(11) To determine the total reactive flux feed rates, the permittee shall record for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of solid reactive flux.

The permittee may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

(12) The permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and 40 CFR Part 63, Subpart RRR. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. The most

recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

The permittee may retain records on microfilm, computer disks, magnetic tape or microfiche. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

(13) In addition to the general records required by 40 CFR 63.10(b), the permittee must maintain records of:

a. for the bag leak detection system, the number of total operating hours for the emissions unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective actions taken;

b. for the lime injected fabric filter, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective actions taken;

c. records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test;

d. records of monthly inspections for proper unit labeling for this furnace;

e. record of annual inspections of emission capture/collection and closed vent system; and

f. current copy of all required plans, including any revisions, with records documenting conformance with the applicable plant, including the SSMP and the OM&M plan.

(14) The FEPTIO application for this emissions unit, P004, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound emitted from the emissions unit, has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., "**X**" hours per day and "**Y**" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Hydrogen fluoride

TLV (mg/m^3): 0.416

Maximum Hourly Emission Rate (lbs/hr): 0.3

Predicted 1-Hour Maximum Ground-Level Concentration ($\mu g/m^3$): 7.450

MAGLC ($\mu g/m^3$): 9.9

The permittee, has demonstrated that emissions of hydrogen fluoride from emissions unit P004, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute," ORC 3704.03(F).

(15) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

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

If the permittee determines that the “Toxic Air Contaminant Statute” 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 solely due to a non-restrictive change to a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final permit prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(16) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the “Toxic Air Contaminant Statute,” ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(17) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

(18) The permittee shall maintain monthly records of the volume (pounds) of lime introduced into the baghouse for this emissions unit.

e) Reporting Requirements

(1) The permittee submitted an updated "Notification of Compliance Status Report" on May 21, 2007.

(2) The permittee submitted a modified SSMP and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standards on May 21, 2007. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown or malfunction is not consistent with the procedure in the plan as described in 40 CFR 63.6(e)(3).

(3) The permittee shall submit semiannual excursion reports to the Ohio EPA Northeast District Office within 60 days after the end of each 6-month period. The 6-month reporting periods shall be January 1 to June 30, and July 1 to December 31 of each calendar year. These reports shall report if any of the following conditions occurred during a 6-month period:

a. the corrective action specified in the OM&M Plan for a bag leak detection system alarm, or for a continuous opacity monitoring deviation, that was not initiated within 1 hour; and/or

b. any excursion of an operational requirement, as listed in c) of this permit.

(4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(5) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrated compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, emissions unit or the exhaust stack have been made, then the report shall include a statement to this effect.

(6) For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:

a. any period of excess emissions, as defined in 40 CFR 63.1516(b)(1), that occurred during the year were reported as required by this subpart; and

b. all monitoring, record keeping, and reporting requirements were met during the year.

(7) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Northeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitations</u>:

PE shall not exceed 3.0 pounds per hour and 13.14 tons per year.

<u>Applicable Compliance Methods</u>:

Compliance with the hourly emission limitation shall be demonstrated based upon stack testing performed in accordance with the methods and procedures specified in f)(2).

The annual emission limitation was developed by multiplying the short-term allowable PE limitation (3.0 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

b. <u>Emission Limitations</u>:

HF emissions shall not exceed 0.30 pound per hour and 1.31 tons per year.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon stack testing performed in accordance with the methods and procedures specified in f)(2).

The annual emission limitation was developed by multiplying the short-term allowable HF emission limitation (0.30 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitations:

D/F emissions shall not exceed 2.1E-04 grain D/F TEQ per ton of feed or charge and 7.7E-07 ton per year.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by stack testing in accordance to f)(2).

Compliance with the annual emission limitation (TPY) shall be determined by calculating a value for grain DF/ton, based on the most recent stack test data. This value, in grain DF/ton, is to be multiplied by the annual tons production and divided by 7,000 grains/pound and 2,000 lbs/ton.

d. Emission Limitation:

Visible PE shall not exceed 10% opacity, as a 6-minute average, at any time.

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitations:

CO emissions shall not exceed 0.41 pound per hour and 1.80 tons per year.

Applicable Compliance Methods:

Compliance with each pollutant was calculated on a one-time basis as follows:

(*42 lbs/mmft^3)(7 - 10 mmBtu/hr)(1 scf/1,027 Btu) = 0.41 lb/hr x 8760/2000 = 1.80 tpy

*The emission factor for CO is from AP-42, Table 1.4-2 (7/98) for natural gas combustion.

The annual emission limitation was developed by multiplying the short-term allowable CO emission limitation (0.41 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

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

a. The emission testing shall be conducted within 12 months of the effective date of this permit. Emissions testing shall also be repeated within 12 months of the expiration of this permit for either this emission unit or emissions unit P006.

b. The following pollutants shall be tested using the appropriate test methods, to determine compliance with the short term emission limitations:

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

HF: 40 CFR Part 60, Appendix A, Method 26A

HCl: 40 CFR Part 60, Appendix A, Method 26A

D/F: 40 CFR Part 60, Appendix A, Method 23A

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

*Fugitives from building: 40 CFR Part 60, Appendix A, Method 22

*This permit for this emission unit does not include a fugitive emission limitation from the building. However, this information shall be documented during the testing period.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA Northeast District Office.

c. The emission testing shall include a measurement and/or record of the following values, when the testing demonstrates compliance with all emission limitations:

i. the actual temperatures of the exhaust gases entering the baghouse;

ii. the actual amounts of hydrated lime injected in the baghouse during the testing period;

iii. the actual feed rates of cover flux and Potassium Aluminum Fluoride during the testing period;

iv. the actual pressure drops across the baghouse during the testing period; and

v. the actual aluminum feed/charge rate during the testing period.

d. The permittee shall use the above measurements/readings obtained during emission testing, when testing demonstrates compliance with all emission limitations, to determine the following in order to comply with the requirements in c)(1), c)(2), and c)(3):

i. maximum 3-hour block average temperature of the exhaust gases entering the baghouse, determined by the average inlet temperature during testing plus 25 degree Fahrenheit;

ii. the setting to feed/inject hydrated lime to the baghouse;

iii. maximum feed rate for cover flux, determined by the average feed rates during testing; and

iv. maximum feed rate for Potassium Aluminum Fluoride, determined by the average feed rates during testing.

e. The test(s) shall be conducted while the emission unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an “Intent to Test” notification to the Ohio EPA Northeast District Office. 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 Northeast District Office’s refusal to accept the results of the emission test(s).

g. Personnel from the Ohio EPA Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

h. 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

3. P006, Rotary Furnace #2

Operations, Property and/or Equipment Description:

Rotary Tilting Melting Furnace #2 utilizing oxyfuel, controlled by baghouse #1 (Sly #1). Baghouse #4 (Sly #4) is the backup baghouse.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(14), d)(15), d)(16), d)(17) and e)(5)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b., c)(2), d)(8) and f)(2)d.ii.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<u>Process Emissions</u>: Particulate emissions (PE) shall not exceed 3.00 pounds per hour and 13.14 ton per year. Hydrogen fluoride (HF) emissions shall not exceed 0.30 pound per hour and 1.31 ton per year. Visible PE shall not exceed 10% opacity, as a 6-minute average, at any time. <u>Products of Combustion</u>: Carbon monoxide (CO) emissions shall not exceed 0.41 pound per hour and 1.80 tons per year.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Compliance with 40 CFR Part 63, Subpart RRR.
b.	OAC rule 3745-31-05(D)(1)(b)	See B.2. through B.6. and b)(2)h.
c.	40 CFR Part 63, Subpart RRR	Dioxins and Furans (D/F) emissions shall not exceed 2.1E-04 grain D/F TEQ per ton of feed or charge and 7.7E-07 tpy. See b)(2)a., b)(2)b., b)(2)c., b)(2)d., b)(2)e., b)(2)f., b)(2)g., c)(1), c)(2) and c)(3).
d.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations required by these applicable rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. Section 63.1503 of 40 CFR Part 63, Subpart RRR defines TEQ as the international method of expressing toxicity equivalents for dioxins and furans as defined in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and - Dibenzofurans (CDDs and CDFs) and 1989 Update” (EPA-625/3-89-016).

b. This emissions unit (P006) is a Group 1 furnace as defined by 40 CFR Part 63, Subpart RRR. This furnace melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing. This furnace may employ 2-6% aluminum fluoride or 1-5% cryolite as a cover flux, and Potassium Aluminum Fluoride as a demagging flux. This furnace has one 7.0 – 10.0 mmBtu/hour burner which fires with oxyfuel. The furnace is equipped with a collection system consisting of a canopy hood and duct work, a dust dropout box, and a 70,000 cfm designed, negative pressure baghouse with hydrated lime injection and a pulse cleaning mechanism. The baghouse operation is monitored using a triboelectric bag leak detection system. There is no sidewell on the furnace. This is not an in-line fluxer. The permit application reports the maximum aluminum scrap charge as 8,252 pounds per hour or 4.13 tons per hour, the maximum cover flux feed rate as 1,860 pounds per hour, the maximum Potassium Aluminum Fluoride feed rate as 331 pounds per hour, and the total charge/feed was 10,442 pounds per hour or 5.22 tons per hour. Note: The actual maximum operating parameters will be set by the most recent performance test which demonstrates compliance with all applicable emission limitations.

c. The permittee must provide and maintain easily visible labels posted at this emissions unit that identifies the applicable emission limits and means of

compliance, including the type of emissions unit (e.g. group 1 furnace) and the applicable operational standards and control methods (work practice or control device). This includes, but is not limited to, the type of charge to be used (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operation, Maintenance and Management (OM&M) Plan.

d. The permittee shall employ a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice." or appropriate chapters of Industrial Ventilation: A Manual of Recommended Practice for Design 27th edition. The permittee has conducted an evaluation of the capture and collection system for this furnace and modified the system accordingly.

e. For the bag leak detection system, the permittee shall initiate corrective action within 1 hour of a bag leak detection system alarm. The fabric filter system shall be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period.

In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective action.

f. This emissions unit shall be operated in accordance with the most current OM&M Plan and most current Startup, Shutdown and Malfunction Plan (SSMP).

g. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M Plan, the owner or operator must initiate corrective action. Corrective actions must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the most recent performance test and steps to prevent the likely recurrence of the cause of a deviation.

h. The permittee shall use hydrated lime in the baghouse serving this emissions unit [Baghouse No. 1 (Sly #1) or Baghouse No. 4 (Sly #3)] at the rate set during the most recent performance test which demonstrates compliance with all emission limitations, and which demonstrates that the HCl emissions from the facility are less than 10 tons per year.

c) Operational Restrictions

(1) The permittee shall maintain the 3-hour block average inlet temperature for the fabric filter at or below the average temperature established during the most recent performance test which demonstrated compliance with the applicable emission limitations, plus 25 degree Fahrenheit.

(2) For the lime injection system, the permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the most recent performance testing which demonstrated compliance with the applicable emission limitations.

(3) The permittee shall maintain the total cover flux and demagging (Potassium Aluminum Fluoride) fluxing rates for each operating cycle or time period used in the most recent performance test which demonstrated compliance with the applicable emission limitations at or below the average rates established during the performance test.

(4) The values for the parameters required in c)(1), c)(2) and c)(3) above, that are established during the most recent performance test which demonstrates compliance with the applicable emission limitations, shall be included as revisions to the OM&M Plan.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain equipment to continuously monitor and record the pressure drop across the baghouse during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee currently monitors and records the pressure drop continuously via the Programmable Logic Controller (PLC).

(2) Whenever the monitored value for the pressure drop deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the

need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The pressure drop shall be maintained within the range of 2 to 12 inches of water.

This range is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(3) The permittee shall collect and record the following information for each day for the control equipment:

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

(4) The permittee must inspect the labels for this emissions unit at least once per calendar month to confirm that posted labels as required by b)(2)c. are intact and legible.

(5) To determine the feed/charge rate, the permittee must calibrate, operate and maintain a device to measure and record the total weight of feed/charge to the emissions unit over the same operating cycle or time period used during the most recent performance test which demonstrated compliance with the applicable emission limitations.

(6) The feed/charge rate shall be recorded using a scale and a recorder, with calibration of the scale at least once every 6-month period to $\pm$ 1% accuracy. The feed/charge must be measured and recorded on an emission unit-by-emission unit basis. The permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(7) The permittee must calculate and record the 3-day, 24-hour rolling average emissions of D/F for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the owner or operator must:

a. calculate and record the total weight of material charged to each emissions unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required above.

b. multiply the total feed /charge weight to the emissions unit for the 24-hour period (in lbs/ton of feed/charge) by the emission rate for that emission unit (as determined during the most recent performance test that demonstrated compliance) to provide emissions for each emission unit for the 24-hour period, in pounds.

(8) The permittee must operate and maintain on a continuous basis a bag leak detection system as required below or a continuous opacity monitoring system as required in 40 CFR Part 63, Subpart RRR. Following initial adjustment of the system, the permittee must not adjust the sensitivity or range, averaging period, alarm set points or alarm delay time except as detailed in the OM&M Plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

(9) For the fabric filter inlet temperature, the permittee shall calibrate, maintain and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in Subparts A and RRR of 40 CFR Part 63. The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.

(10) To verify that lime is always free-flowing in the continuous lime injection system the permittee shall inspect each feed hopper or silo at least once each 8-hour period and record the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the permittee must increase the frequency of inspections to at least once every 4-hour period over the next 3 days. The permittee may return to inspections at least once every 8-hour period if corrective action results in no further blockages of lime during the 3-day period.

The permittee has requested and received approval to install, operate and maintain a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. Alternatively, the permittee may operate this system to determine the lime is free-flowing in the continuous lime injection system.

If lime is found not to be free-flowing, the permittee must promptly initiate and complete corrective action. The permittee must record the lime feeder setting once each day of operation.

(11) To determine the total reactive flux feed rates, the permittee shall record for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of solid reactive flux.

The permittee may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

(12) The permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and 40 CFR Part 63, Subpart RRR. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. The most

recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

The permittee may retain records on microfilm, computer disks, magnetic tape or microfiche. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

(13) In addition to the general records required by 40 CFR 63.10(b), the permittee must maintain records of:

a. for the bag leak detection system, the number of total operating hours for the emissions unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective actions taken;

b. for the lime injected fabric filter, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective actions taken;

c. records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test;

d. records of monthly inspections for proper unit labeling for this furnace;

e. record of annual inspections of emission capture/collection and closed vent system; and

f. current copy of all required plans, including any revisions, with records documenting conformance with the applicable plant, including the SSMP and the OM&M plan.

(14) The FEPTIO application for this emissions unit, P006, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound emitted from the emissions unit, has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., "**X**" hours per day and "**Y**" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Hydrogen fluoride

TLV (mg/m^3): 0.416

Maximum Hourly Emission Rate (lbs/hr): 0.3

Predicted 1-Hour Maximum Ground-Level Concentration ($\mu g/m^3$): 6.068

MAGLC ($\mu g/m^3$): 9.9

The permittee, has demonstrated that emissions of hydrogen fluoride from emissions unit P006, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute," ORC 3704.03(F).

(15) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

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

If the permittee determines that the “Toxic Air Contaminant Statute” 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 solely due to a non-restrictive change to a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final permit prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(16) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the “Toxic Air Contaminant Statute,” ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(17) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

(18) The permittee shall maintain monthly records of the volume (pounds) of lime introduced into the baghouse for this emissions unit.

e) Reporting Requirements

(1) The permittee submitted an updated "Notification of Compliance Status Report" on May 21, 2007.

(2) The permittee submitted a modified SSMP and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standards on May 21, 2007. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown or malfunction is not consistent with the procedure in the plan as described in 40 CFR 63.6(e)(3).

(3) The permittee shall submit semiannual excursion reports to the Ohio EPA Northeast District Office within 60 days after the end of each 6-month period. The 6-month reporting periods shall be January 1 to June 30, and July 1 to December 31 of each calendar year. These reports shall report if any of the following conditions occurred during a 6-month period:

a. the corrective action specified in the OM&M Plan for a bag leak detection system alarm, or for a continuous opacity monitoring deviation, that was not initiated within 1 hour; and/or

b. any excursion of an operational requirement, as listed in c) of this permit.

(4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(5) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrated compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, emissions unit or the exhaust stack have been made, then the report shall include a statement to this effect.

(6) For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:

a. any period of excess emissions, as defined in 40 CFR 63.1516(b)(1), that occurred during the year were reported as required by this subpart; and

b. all monitoring, record keeping, and reporting requirements were met during the year.

(7) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Northeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitations</u>:

PE shall not exceed 3.0 pounds per hour and 13.14 tons per year.

<u>Applicable Compliance Methods</u>:

Compliance with the hourly emission limitation shall be demonstrated based upon stack testing performed in accordance with the methods and procedures specified in f)(2).

The annual emission limitation was developed by multiplying the short-term allowable PE limitation (3.0 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

b. <u>Emission Limitations</u>:

HF emissions shall not exceed 0.30 pound per hour and 1.31 tons per year.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon stack testing performed in accordance with the methods and procedures specified in f)(2).

The annual emission limitation was developed by multiplying the short-term allowable HF emission limitation (0.30 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitations:

D/F emissions shall not exceed 2.1E-04 grain D/F TEQ per ton of feed or charge and 7.7E-07 ton per year.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by stack testing in accordance to f)(2).

Compliance with the annual emission limitation (TPY) shall be determined by calculating a value for grain DF/ton, based on the most recent stack test data. This value, in grain DF/ton, is to be multiplied by the annual tons production and divided by 7,000 grains/pound and 2,000 lbs/ton.

d. Emission Limitation:

Visible PE shall not exceed 10% opacity, as a 6-minute average, at any time

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitations:

CO emissions shall not exceed 0.41 pound per hour and 1.80 ton per year

Applicable Compliance Methods:

Compliance with each pollutant was calculated on a one-time basis as follows:

(*42 lbs/mmft^3)(7 - 10 mmBtu/hr)(1 scf/1,027 Btu) = 0.41 lb/hr x 8760/2000 = 1.80 tpy

*The emission factor for CO is from AP-42, Table 1.4-2 (7/98) for natural gas combustion.

The annual emission limitation was developed by multiplying the short-term allowable CO emission limitation (0.41 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

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

a. The emission testing shall be conducted within 12 months of the effective date of this permit. Emissions testing shall also be repeated within 12 months of the expiration of this permit for either this emission unit or emissions unit P006.

b. The following pollutants shall be tested using the appropriate test methods, to determine compliance with the short term emission limitations:

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

HF: 40 CFR Part 60, Appendix A, Method 26A

HCl: 40 CFR Part 60, Appendix A, Method 26A

D/F: 40 CFR Part 60, Appendix A, Method 23A

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

*Fugitives from building: 40 CFR Part 60, Appendix A, Method 22

*This permit for this emission unit does not include a fugitive emission limitation from the building. However, this information shall be documented during the testing period.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA Northeast District Office.

c. The emission testing shall include a measurement and/or record of the following values, when the testing demonstrates compliance with all emission limitations:

i. the actual temperatures of the exhaust gases entering the baghouse;

ii. the actual amounts of hydrated lime injected in the baghouse during the testing period;

iii. the actual feed rates of cover flux and Potassium Aluminum Fluoride during the testing period;

iv. the actual pressure drops across the baghouse during the testing period; and

v. the actual aluminum feed/charge rate during the testing period.

d. The permittee shall use the above measurements/readings obtained during emission testing, when testing demonstrates compliance with all emission limitations, to determine the following in order to comply with the requirements in c)(1), c)(2), and c)(3):

i. maximum 3-hour block average temperature of the exhaust gases entering the baghouse, determined by the average inlet temperature during testing plus 25 degree Fahrenheit;

ii. the setting to feed/inject hydrated lime to the baghouse;

iii. maximum feed rate for cover flux, determined by the average feed rates during testing; and

iv. maximum feed rate for Potassium Aluminum Fluoride, determined by the average feed rates during testing.

e. The test(s) shall be conducted while the emission unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an “Intent to Test” notification to the Ohio EPA Northeast District Office. 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 Northeast District Office’s refusal to accept the results of the emission test(s).

g. Personnel from the Ohio EPA Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

h. 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

4. P010, Reverberatory Furnace

Operations, Property and/or Equipment Description:

Reverberatory Furnace utilizing oxyfuel, controlled by baghouse #2 (Sly #2).

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(14), d)(15), d)(16), d)(17) and e)(5)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b., c)(2), d)(8) and f)(2)d.ii.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<u>Process Emissions</u>: Particulate emissions (PE) shall not exceed 3.80 pounds per hour and 16.60 ton per year. Hydrogen fluoride (HF) emissions shall not exceed 0.30 pound per hour and 1.31 ton per year. Visible PE shall not exceed 10% opacity, as a 6-minute average, at any time. <u>Products of Combustion</u>: Carbon monoxide (CO) emissions shall not exceed 0.82 pound per hour and 3.59 ton per year.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Compliance with 40 CFR Part 63, Subpart RRR
b.	OAC rule 3745-31-05(D)(1)(b)	See B.2. through B.6. and b)(2)i.
c.	40 CFR Part 63, Subpart RRR	Dioxins and Furans (D/F) emissions shall not exceed 2.1E-04 grain D/F TEQ per ton of feed or charge and 7.7E-07 tpy. See b)(2)a., b)(2)b., b)(2)c., b)(2)d., b)(2)e., b)(2)f., b)(2)g., c)(1), c)(2) and c)(3).
d.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations required by these applicable rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. Section 63.1503 of 40 CFR Part 63, Subpart RRR defines TEQ as the international method of expressing toxicity equivalents for dioxins and furans as defined in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and - Dibenzofurans (CDDs and CDFs) and 1989 Update” (EPA-625/3-89-016).

b. This emissions unit (P010) is a Group 1 furnace as defined by 40 CFR Part 63, Subpart RRR. This furnace melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing. This furnace may employ 2-6% aluminum fluoride or 1-5% cryolite as a cover flux, and Potassium Aluminum Fluoride as a demagging flux. This reverberatory furnace has two 10 mmBtu/hr burners which fire with oxyfuel. The furnace is equipped with a collection system consisting of a canopy hood and duct work, a cyclone, a spark arrestor, and a 70,000 cfm designed, negative pressure baghouse with hydrated lime injection and a pulse cleaning mechanism. The baghouse operation is equipped with a bag leak detection system. This furnace has a sidewell. The emissions from the sidewell are collected and controlled with the furnace emissions. This is not an in-line fluxer. This permit also allows for the modification of the reverberatory furnace to increase the holding capacity of the furnace from 60,000 pounds to 110,000 pounds. The permit application reports the maximum aluminum scrap charge as 7,535 pounds per hour or 3.77 tons per hour, the maximum cover flux feed rate as 673 pounds per hour, the maximum Potassium Aluminum Fluoride feed rate as 657 pounds per hour, and the total charge/feed as 8,864 pounds per hour or 4.43 tons per hour. Note: The actual maximum operating parameters will be set by the most recent performance test which demonstrates compliance with all applicable emission limitations.

c. The permittee must provide and maintain easily visible labels posted at this emissions unit that identifies the applicable emission limits and means of compliance, including the type of emissions unit (e.g. group 1 furnace) and the applicable operational standards and control methods (work practice or control device). This includes, but is not limited to, the type of charge to be used (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operation, Maintenance and Management (OM&M) Plan.

d. The permittee shall employ a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice." or appropriate chapters of Industrial Ventilation: A Manual of Recommended Practice for Design 27th edition. The permittee has conducted an evaluation of the capture and collection system for this furnace and modified the system accordingly.

e. For the bag leak detection system, the permittee shall initiate corrective action within 1 hour of a bag leak detection system alarm. The fabric filter system shall be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period.

In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective action.

f. This emissions unit shall be operated in accordance with the most current OM&M Plan and most current Startup, Shutdown and Malfunction Plan (SSMP).

g. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M Plan, the owner or operator must initiate corrective action. Corrective actions must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the most recent performance test and steps to prevent the likely recurrence of the cause of a deviation.

h. The allowable emissions stated in b)(1) include emissions from the furnace and emissions from the sidewell, combined.

i. The permittee shall use hydrated lime in the baghouse serving this emissions unit [Baghouse No. 2 (Sly #2)] at the rate set during the most recent performance

test which demonstrates compliance with all emission limitations, and which demonstrates that the HCl emissions from the facility are less than 10 tons per year.

c) Operational Restrictions

(1) The permittee shall maintain the 3-hour block average inlet temperature for the fabric filter at or below the average temperature established during the most recent performance test which demonstrated compliance with the applicable emission limitations, plus 25 degree Fahrenheit.

(2) For the lime injection system, the permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the most recent performance testing which demonstrated compliance with the applicable emission limitations.

(3) The permittee shall maintain the total cover flux and demagging (Potassium Aluminum Fluoride) fluxing rates for each operating cycle or time period used in the most recent performance test which demonstrated compliance with the applicable emission limitations at or below the average rates established during the performance test.

(4) The values for the parameters required in c)(1), c)(2) and c)(3) above, that are established during the most recent performance test which demonstrates compliance with the applicable emission limitations, shall be included as revisions to the OM&M Plan.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain equipment to continuously monitor and record the pressure drop across the baghouse during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee currently monitors and records the pressure drop continuously via the Programmable Logic Controller (PLC).

(2) Whenever the monitored value for the pressure drop deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period

of time (in minutes) during which there was a deviation, the pressure drop readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The pressure drop shall be maintained within the range of 2 to 12 inches of water.

This range is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(3) The permittee shall collect and record the following information for each day for the control equipment:

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

(4) The permittee must inspect the labels for this emissions unit at least once per calendar month to confirm that posted labels as required by b)(2)c. are intact and legible.

(5) To determine the feed/charge rate, the permittee must calibrate, operate and maintain a device to measure and record the total weight of feed/charge to the emissions unit over the same operating cycle or time period used during the most recent performance test which demonstrated compliance with the applicable emission limitations.

(6) The feed/charge rate shall be recorded using a scale and a recorder, with calibration of the scale at least once every 6-month period to $\pm$ 1% accuracy. The feed/charge must be measured and recorded on an emission unit-by-emission unit basis. The permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(7) The permittee must calculate and record the 3-day, 24-hour rolling average emissions of D/F for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the owner or operator must:

a. calculate and record the total weight of material charged to each emissions unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required above.

b. multiply the total feed /charge weight to the emissions unit for the 24-hour period (in lbs/ton of feed/charge) by the emission rate for that emission unit (as determined during the most recent performance test that demonstrated compliance) to provide emissions for each emission unit for the 24-hour period, in pounds.

(8) The permittee must operate and maintain on a continuous basis a bag leak detection system as required below or a continuous opacity monitoring system as required in 40 CFR Part 63, Subpart RRR. Following initial adjustment of the system, the permittee must not adjust the sensitivity or range, averaging period, alarm set points or alarm delay time except as detailed in the OM&M Plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

(9) For the fabric filter inlet temperature, the permittee shall calibrate, maintain and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in Subparts A and RRR of 40 CFR Part 63. The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.

(10) To verify that lime is always free-flowing in the continuous lime injection system the permittee shall inspect each feed hopper or silo at least once each 8-hour period and record the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the permittee must increase the frequency of inspections to at least once every 4-hour period over the next 3 days. The permittee may return to inspections at least once every 8-hour period if corrective action results in no further blockages of lime during the 3-day period.

The permittee has requested and received approval to install, operate and maintain a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. Alternatively, the permittee may operate this system to determine the lime is free-flowing in the continuous lime injection system.

If lime is found not to be free-flowing, the permittee must promptly initiate and complete corrective action. The permittee must record the lime feeder setting once each day of operation.

(11) To determine the total reactive flux feed rates, the permittee shall record for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of solid reactive flux.

The permittee may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

(12) The permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and 40 CFR Part 63, Subpart RRR. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. The most

recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

The permittee may retain records on microfilm, computer disks, magnetic tape or microfiche. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

(13) In addition to the general records required by 40 CFR 63.10(b), the permittee must maintain records of:

a. for the bag leak detection system, the number of total operating hours for the emissions unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective actions taken;

b. for the lime injected fabric filter, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective actions taken;

c. records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test;

d. records of monthly inspections for proper unit labeling for this furnace;

e. record of annual inspections of emission capture/collection and closed vent system; and

f. current copy of all required plans, including any revisions, with records documenting conformance with the applicable plant, including the SSMP and the OM&M plan.

(14) The FEPTIO application for this emissions unit, P010, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound emitted from the emissions unit, has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., "**X**" hours per day and "**Y**" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Hydrogen fluoride

TLV (mg/m^3): 0.416

Maximum Hourly Emission Rate (lbs/hr): 0.3

Predicted 1-Hour Maximum Ground-Level Concentration ($\mu g/m^3$): 4.252

MAGLC ($\mu g/m^3$): 9.9

The permittee, has demonstrated that emissions of hydrogen fluoride from emissions unit P010, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute," ORC 3704.03(F).

(15) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

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

If the permittee determines that the “Toxic Air Contaminant Statute” 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 solely due to a non-restrictive change to a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final permit prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(16) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the “Toxic Air Contaminant Statute,” ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(17) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

(18) The permittee shall maintain monthly records of the volume (pounds) of lime introduced into the baghouse for this emissions unit.

e) Reporting Requirements

(1) The permittee submitted an updated "Notification of Compliance Status Report" on May 21, 2007.

(2) The permittee submitted a modified SSMP and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standards on May 21, 2007. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown or malfunction is not consistent with the procedure in the plan as described in 40 CFR 63.6(e)(3).

(3) The permittee shall submit semiannual excursion reports to the Ohio EPA Northeast District Office within 60 days after the end of each 6-month period. The 6-month reporting periods shall be January 1 to June 30, and July 1 to December 31 of each calendar year. These reports shall report if any of the following conditions occurred during a 6-month period:

a. the corrective action specified in the OM&M Plan for a bag leak detection system alarm, or for a continuous opacity monitoring deviation, that was not initiated within 1 hour; and/or

b. any excursion of an operational requirement, as listed in c) of this permit.

(4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(5) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrated compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, emissions unit or the exhaust stack have been made, then the report shall include a statement to this effect.

(6) For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:

a. any period of excess emissions, as defined in 40 CFR 63.1516(b)(1), that occurred during the year were reported as required by this subpart; and

b. all monitoring, record keeping, and reporting requirements were met during the year.

(7) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Northeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitations</u>:

PE shall not exceed 3.80 lbs/hr and 16.60 tons per year.

<u>Applicable Compliance Methods</u>:

Compliance with the hourly emission limitation shall be demonstrated based upon stack testing performed in accordance with the methods and procedures specified in f)(2).

The annual emission limitation was developed by multiplying the short-term allowable PE limitation (3.0 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

b. <u>Emission Limitations</u>:

HF emissions shall not exceed 0.30 lb/hr and 1.31 tons per year.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon stack testing performed in accordance with the methods and procedures specified in f)(2).

The annual emission limitation was developed by multiplying the short-term allowable HF emission limitation (0.30 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitations:

D/F emissions shall not exceed 2.1E-04 grain D/F TEQ per ton of feed or charge and 7.7E-07 tpy.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by stack testing in accordance to f)(2).

Compliance with the annual emission limitation (TPY) shall be determined by calculating a value for grain DF/ton, based on the most recent stack test data. This value, in grain DF/ton, is to be multiplied by the annual tons production and divided by 7,000 grains/pound and 2,000 lbs/ton.

d. Emission Limitation:

Visible PE shall not exceed 10% opacity, as a 6-minute average, at any time

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitations:

CO emissions shall not exceed 0.89 lb/hr and 3.59 tpy

Applicable Compliance Methods:

Compliance with each pollutant was calculated on a one-time basis as follows:

(*42 lbs/mmft^3)(7 - 10 mmBtu/hr)(1 scf/1,027 Btu) = 0.41 lb/hr x 8760/2000 = 1.80 tpy

*The emission factor for CO is from AP-42, Table 1.4-2 (7/98) for natural gas combustion.

The annual emission limitation was developed by multiplying the short-term allowable CO emission limitation (0.89 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

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

a. The emission testing shall be conducted within 12 months of the effective date of this permit. Emissions testing shall also be repeated within 12 months of the expiration of this permit for either this emission unit or emissions unit P006.

b. The following pollutants shall be tested using the appropriate test methods, to determine compliance with the short term emission limitations:

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

HF: 40 CFR Part 60, Appendix A, Method 26A

HCl: 40 CFR Part 60, Appendix A, Method 26A

D/F: 40 CFR Part 60, Appendix A, Method 23A

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

*Fugitives from building: 40 CFR Part 60, Appendix A, Method 22

*This permit for this emission unit does not include a fugitive emission limitation from the building. However, this information shall be documented during the testing period.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA Northeast District Office.

c. The emission testing shall include a measurement and/or record of the following values, when the testing demonstrates compliance with all emission limitations:

i. the actual temperatures of the exhaust gases entering the baghouse;

ii. the actual amounts of hydrated lime injected in the baghouse during the testing period;

iii. the actual feed rates of cover flux and Potassium Aluminum Fluoride during the testing period;

iv. the actual pressure drops across the baghouse during the testing period; and

v. the actual aluminum feed/charge rate during the testing period.

d. The permittee shall use the above measurements/readings obtained during emission testing, when testing demonstrates compliance with all emission limitations, to determine the following in order to comply with the requirements in c)(1), c)(2), and c)(3):

i. maximum 3-hour block average temperature of the exhaust gases entering the baghouse, determined by the average inlet temperature during testing plus 25 degree Fahrenheit;

ii. the setting to feed/inject hydrated lime to the baghouse;

iii. maximum feed rate for cover flux, determined by the average feed rates during testing; and

iv. maximum feed rate for Potassium Aluminum Fluoride, determined by the average feed rates during testing.

e. The test(s) shall be conducted while the emission unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an “Intent to Test” notification to the Ohio EPA Northeast District Office. 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 Northeast District Office’s refusal to accept the results of the emission test(s).

g. Personnel from the Ohio EPA Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

h. 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.