



State of Ohio Environmental Protection Agency

**STREET ADDRESS:**

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50 W. Town St., Suite 700  
Columbus, Ohio 43215

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www.epa.state.oh.us

**MAILING ADDRESS:**

P.O. Box 1049  
Columbus, OH 43216-1049

9/16/2008

Certified Mail

Troy Kajfasz  
Brush Wellman Inc.  
14710 W. Portage River South Road  
Elmore, OH 43416-9502

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR
No	CEMS
Yes	MACT
Yes	NSPS
Yes	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 0362000009  
Permit Number: 03-17418  
Permit Type: Initial Installation  
County: Ottawa

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

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. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northwest District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page <http://www.epa.state.oh.us/dapc>.

Sincerely,

*Michael W. Ahern*  
Michael W. Ahern, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 Via E-Mail Notification  
Ohio EPA DAPC, Northwest District Office

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director





**State of Ohio Environmental Protection Agency  
Division of Air Pollution Control**

**FINAL**

**Air Pollution Permit-to-Install  
for  
Brush Wellman Inc.**

Facility ID: 0362000009  
Permit Number: 03-17418  
Permit Type: Initial Installation  
Issued: 9/16/2008  
Effective: 9/16/2008





State of Ohio Environmental Protection Agency  
 Division of Air Pollution Control

**Air Pollution Permit-to-Install**  
 for  
 Brush Wellman Inc.

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Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 03-17418  
**Facility ID:** 0362000009  
**Effective Date:** 9/16/2008

# Authorization

Facility ID: 0362000009  
Facility Description: Copper Rolling and Drawing  
Application Number(s): A0004472, A0035744  
Permit Number: 03-17418  
Permit Description: PTI for the installation of 5 furnaces, two boilers and other sources associated with the new Pebble Plant.  
Permit Type: Initial Installation  
Permit Fee: \$2,600.00  
Issue Date: 9/16/2008  
Effective Date: 9/16/2008

This document constitutes issuance to:

Brush Wellman Inc.  
14710 W. Portage River South Road  
1/4 mile east of SR 590  
Harris, OH 43416-9502

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402  
(419)352-8461

The above named entity is hereby granted a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director



## Authorization (continued)

Permit Number: 03-17418  
Permit Description: PTI for the installation of 5 furnaces, two boilers and other sources associated with the new Pebble Plant.

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

<b>Emissions Unit ID:</b>	<b>B006</b>
Company Equipment ID:	Fire Tube Boiler #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>B007</b>
Company Equipment ID:	Fire Tube Boiler #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P114</b>
Company Equipment ID:	Decomposition Furnace #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P115</b>
Company Equipment ID:	Decomposition Furnace #3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P116</b>
Company Equipment ID:	Reduction Furnace #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P117</b>
Company Equipment ID:	Reduction Furnace #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P118</b>
Company Equipment ID:	Wet Plant
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P119</b>
Company Equipment ID:	Material Handling System
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P120</b>
Company Equipment ID:	Furnace Rebuild Operation
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P121</b>
Company Equipment ID:	Lab Hoods
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P122</b>
Company Equipment ID:	Decomposition Furnace No. 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 03-17418  
**Facility ID:** 0362000009  
**Effective Date:** 9/16/2008

## **A. Standard Terms and Conditions**



## **1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
  - (1) Standard Term and Condition A. 2.a), Severability Clause
  - (2) Standard Term and Condition A. 3.c) through A. 3.e) General Requirements
  - (3) Standard Term and Condition A. 6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A. 9., Reporting Requirements
  - (5) Standard Term and Condition A. 10., Applicability
  - (6) Standard Term and Condition A. 11.b) through A. 11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A. 14., Public Disclosure
  - (8) Standard Term and Condition A. 15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A. 16., Fees
  - (10) Standard Term and Condition A. 17., Permit Transfers

## **2. Severability Clause**

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## **3. General Requirements**

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

#### **4. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.



(2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northwest District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## **5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northwest District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## **6. Compliance Requirements**

a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:



- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## **7. Best Available Technology**

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

## **8. Air Pollution Nuisance**

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

## **9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted



(i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

## **10. Applicability**

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

## **11. Construction of New Sources(s) and Authorization to Install**

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., 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) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed through completion of the annual PER covering the last period of operation of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum,



the permit requirements must be evaluated as part of the PER covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a PER, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

## **12. Permit-To-Operate Application**

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

## **13. Construction Compliance Certification**

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## **14. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

## **15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.



**16. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Northwest District Office must be notified in writing of any transfer of this permit.

**18. Risk Management Plans**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

**19. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 03-17418  
**Facility ID:** 0362000009  
**Effective Date:** 9/16/2008

## **B. Facility-Wide Terms and Conditions**



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 03-17418  
**Facility ID:** 0362000009  
**Effective Date:** 9/16/2008

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.
2. The ambient concentration of Be in the vicinity of the facility shall not exceed 0.01 micrograms (ug)/cubic meter, averaged over a 30-day period, as specified in the National Emissions Standard for Hazardous Air Pollutants, 40 CFR 61.32 (b). The permittee shall properly operate and maintain control equipment and implement control measures for all Be emitting emissions units at the facility.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 03-17418  
**Facility ID:** 0362000009  
**Effective Date:** 9/16/2008

## **C. Emissions Unit Terms and Conditions**



**1. B006, Fire Tube Boiler #1**

**Operations, Property and/or Equipment Description:**

12.8 mmBTU/hr Natural Gas-Fired Boiler #1

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)(a)(ii)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average except as provided by rule
c.	OAC rule 3745-17-10(B)(1)	The maximum allowable amount of particulate emissions shall be 0.020 lb/mmBtu of actual heat input [see b)(2)b.]
d.	OAC rule 3745-18-06	See b)(2)c.
e.	OAC rule 3745-21-08(B)	See b)(2)d.
f.	40 CFR Part 60 Subpart Dc	Record keeping [see d(2)]

(2) Additional Terms and Conditions

a. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to nitrogen oxide (NOx), carbon monoxide (CO), particulate matter 10 microns or less in size (PM10), sulfur dioxide (SO2), and volatile organic compound (VOC) emissions from this air contaminant source since the uncontrolled potential to emit for NOx, CO, PM10, SO2, VOC are each less than ten tons per year.

The potential to emit for NOx emissions equals 5.50 tons/yr and was determined by dividing the maximum emission rate of 100 lbs NOx/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-1, 7/98) by a heat content of 1020 Btu/scf, and



multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

The potential to emit for CO emissions equals 4.62 tons/yr and was determined by dividing the maximum emission rate of 84 lbs CO/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-1, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

The potential to emit for PM10 emissions equals 0.42 ton/yr and was determined by dividing the maximum emission rate of 7.6 lbs PM10/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-2, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs. [Note: All emissions of particulate matter are PM10].

The potential to emit for VOC emissions equals 0.30 ton/yr and was determined by dividing the maximum emission rate of 5.5 lbs VOC/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-2, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

The potential to emit for SO2 emissions equals 0.033 ton/yr and was determined by dividing the maximum emission rate of 0.6 lb SO2/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-2, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

- b. The potential to emit for particulate emissions from this emissions unit [see b)(2)a.] is less than the allowable emission limitation established pursuant to this rule.
- c. The emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
- d. The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, that rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) however, until the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

c) Operational Restrictions

- (1) The permittee shall burn natural gas in this emissions unit. The permittee may use propane as an emergency back-up fuel.



d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall collect and record the volume (mmft<sup>3</sup>) of natural gas combusted in this emissions unit each calendar month.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than pipeline quality natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) This emissions unit is subject to the applicable provisions of Subpart Dc of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. actual start-up date (within 15 days after such date); and,
- c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
Northwest District Office  
Division of Air Pollution Control  
347 North Dunbridge Road  
Bowling Green, Ohio 43402

f) Testing Requirements

- (1) Compliance with the emission limitations in the terms and conditions of this permit shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
  
Visible particulate emissions shall not exceed 20% opacity as a 6-minute average except as provided by rule



Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR Part 60, Appendix A.

b. Emission Limitation:

The maximum allowable amount of particulate emissions shall be 0.020 lb/mmBtu of actual heat input

Applicable Compliance Method:

Compliance with the lb/mmBtu emission limitation shall be determined by converting the 1.9 lb PE/mmscf of natural gas from AP-42, Section 1.4, Table 1.4-2, 7/98) into lb/mmBtu by dividing by 1020 Btu/scf of natural gas. If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1 - 4, and 5 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.



**2. B007, Fire Tube Boiler #2**

**Operations, Property and/or Equipment Description:**

12.8 mmBTU/hr Natural Gas-Fired Boiler #2

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)(a)(ii)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average except as provided by rule
c.	OAC rule 3745-17-10(B)(1)	The maximum allowable amount of particulate emissions shall be 0.020 lb/mmBtu of actual heat input [see b)(2)b.]
d.	OAC rule 3745-18-06	See b)(2)c.
e.	OAC rule 3745-21-08(B)	See b)(2)d.
f.	40 CFR Part 60 Subpart Dc	Record keeping [see d(2)]

(2) Additional Terms and Conditions

a. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to nitrogen oxide (NOx), carbon monoxide (CO), particulate matter 10 microns or less in size (PM10), sulfur dioxide (SO2), and volatile organic compound (VOC) emissions from this air contaminant source since the uncontrolled potential to emit for NOx, CO, PM10, SO2, VOC are each less than ten tons per year.

The potential to emit for NOx emissions equals 5.50 tons/yr and was determined by dividing the maximum emission rate of 100 lbs NOx/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-1, 7/98) by a heat content of 1020 Btu/scf, and



multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

The potential to emit for CO emissions equals 4.62 tons/yr and was determined by dividing the maximum emission rate of 84 lbs CO/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-1, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

The potential to emit for PM10 emissions equals 0.42 ton/yr and was determined by dividing the maximum emission rate of 7.6 lbs PM10/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-2, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs. [Note: All emissions of particulate matter are PM10].

The potential to emit for VOC emissions equals 0.30 ton/yr and was determined by dividing the maximum emission rate of 5.5 lbs VOC/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-2, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

The potential to emit for SO2 emissions equals 0.033 ton/yr and was determined by dividing the maximum emission rate of 0.6 lb SO2/10<sup>6</sup> scf of natural gas (AP-42, Section 1.4, Table 1.4-2, 7/98) by a heat content of 1020 Btu/scf, and multiplying by a maximum heat input of 12.8 mmBtu/hr, a maximum operating schedule of 8,760 hrs/yr, and a conversion factor of 1 ton/2000 lbs.

- b. The potential to emit for particulate emissions from this emissions unit [see b)(2)a.] is less than the allowable emission limitation established pursuant to this rule.
- c. The emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
- d. The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, that rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) however, until the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

c) Operational Restrictions

- (1) The permittee shall burn natural gas in this emissions unit. The permittee may use propane as an emergency back-up fuel.



d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall collect and record the volume (mmft3) of natural gas combusted in this emissions unit each calendar month.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than pipeline quality natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) This emissions unit is subject to the applicable provisions of Subpart Dc of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. actual start-up date (within 15 days after such date); and,
- c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
Northwest District Office  
Division of Air Pollution Control  
347 North Dunbridge Road  
Bowling Green, Ohio 43402

f) Testing Requirements

- (1) Compliance with the emission limitations in the terms and conditions of this permit shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
Visible particulate emissions shall not exceed 20% opacity as a 6-minute average except as provided by rule



Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR Part 60, Appendix A.

b. Emission Limitation:

The maximum allowable amount of particulate emissions shall be 0.020 lb/mmBtu of actual heat input

Applicable Compliance Method:

Compliance with the lb/mmBtu emission limitation shall be determined by converting the 1.9 lb PE/mmscf of natural gas from AP-42, Section 1.4, Table 1.4-2, 7/98) into lb/mmBtu by dividing by 1020 Btu/scf of natural gas. If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1 - 4, and 5 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.



**3. P114, Decomposition Furnace #2**

**Operations, Property and/or Equipment Description:**

Decomposition Furnace #2

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) g)(1)
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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(D)	<p>See b)(2)b.</p> <p><u>The following limitations apply to emission units P114, P115, P116, P117, P118, and P122 combined [see b)(2)a.]:</u></p> <p>Combined emissions of Be shall not exceed 0.0084 lb/hr and 0.0368 ton/yr.</p> <p>Combined emissions of Fluoride compounds shall not exceed 0.138 lb/hr and 0.605 ton/yr.</p> <p>Combined emissions of HCN shall not exceed 0.10 lb/hr and 0.44 ton/yr.</p> <p>Combined emissions of PM10 shall not exceed 0.426 lb/hr and 1.87 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit.</p>
b.	OAC rule 3745-17-11(B)	See b)(2)c.
c.	OAC rule 3745-17-07(A)	See b)(2)d.
d.	40 CFR 61.32(b)	See term 2 of section B. - FACILITY-WIDE TERMS AND CONDITIONS.
e.		



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR Part 63 Subpart GGGGGG	See b)(2)e.

(2) Additional Terms and Conditions

- a. The combined emission limitations include emissions from the three decomposition furnaces (P114, P115, and P122), two reduction furnaces (P116 and P117), and the concentrated fluoride operations of P118. These sources are all controlled by the same wet electrostatic precipitator (ESP). It should be noted that HCN is only emitted from emission units P114, P115, and P122.
- b. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).
  - i. use of a wet ESP to control emissions from P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118.
  - ii. the wet ESP shall achieve the following control efficiencies and an associated 5% opacity, as a six-minute average.
    - (a) 80% control efficiency for Be;
    - (b) 80% control efficiency for Fluoride compounds;
    - (c) 80% control efficiency for PM10\*\*

\*\*All particulate matter emissions are PM10 and include Be and Fluoride compounds.
  - iii. The combined potential to emit for Be, Fluoride compounds, and PM10 from emission units P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118 is represented by the combined ton per year limitation established under OAC rule 3745-31-05(D). The combined ton per year emission limitations were established using the following maximum uncontrolled emission rates (from process recovery scrubbers) and the respective pollutant control efficiency:
    - (a) For each individual decomposition furnace (P114, P115, and P122):
      - (i) Be - 0.00255 lb/hr, 0.011 ton/yr
      - (ii) Fluoride compounds – 0.0088 lb/hr, 0.0385 ton/yr
      - (iii) PM10 – 0.6 lb/hr, 2.63 tons/yr
    - (b) For reduction furnaces P116 and P117 combined:
      - (i) Be – 0.0345 lb/hr, 0.15 ton/yr



- (ii) Fluoride compounds – 0.033 lb/hr, 0.14 ton/yr
- (iii) PM10 – 0.27 lb/hr, 1.18 tons/yr
- (c) For the concentrated fluoride operations of P118:
  - (i) Be – 0.000008 lb/hr, 0.000035 ton/yr
  - (ii) Fluoride compounds – 0.007 lb/hr, 0.031 ton/yr
  - (iii) PM10 – 0.06 lb/hr, 0.263 ton/yr
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). This determination is based on all emissions of particulate matter being PM10 and the established PM10 limitation being more restrictive than particulate emissions limitation established by OAC rule 3745-17-11(B). Particulate emissions (PE) measured using Method 5 of 40 CFR Part 60, Appendix A would be equivalent to the filterable particulates measured using Method 201/201A of 40 CFR, Part 51, Appendix M. A PM10 limitation is more stringent due to the inclusion of condensable particulate matter measured by Method 202 of 40 CFR, Part 51, Appendix M.
- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. In accordance with 40 CFR 63.11165 the standards and compliance requirements for Primary Beryllium Production Facilities is compliance with the requirements of 40 CFR 61.32 through 40 CFR 61.34 of the National Emission Standards for Beryllium (See term 2 of section B - FACILITY-WIDE TERMS AND CONDITIONS).

The permittee shall comply with "General Provision" requirements as indicated in 40 CFR 63.11166.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the secondary voltage, in kilovolts, and the current, in milliamps, for each of the fields within the ESP during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the voltage and current within a field in the ESP on a continuous basis.

Whenever the monitored value for the voltage and/or current with a field in the ESP deviates from the value 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 value 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, 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.

Acceptable ranges for the secondary voltage and current for each field within the ESP shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

These ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the ranges based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. In addition, approved revisions to the ranges 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. for each field of the ESP, each period of time when the field was not operating within the acceptable ranges for voltage and current;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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



f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emissions testing shall be conducted within 180 days after initial startup of the emissions units. All three decomposition furnaces (P114, P115, and P122) must be operating along with the following emission units during the test: both reduction furnaces (P116 and P117), and the Wet Plant Concentrated Fluoride Operations of P118. All of these emission units are controlled by the same wet electrostatic precipitator.
  - b. The emission testing shall be conducted to demonstrate compliance with the following limits:
    - i. the combined mass emission limitations of 0.0084 lb Be/hr, 0.138 lb Fluoride compounds/hr, 0.10 lb HCN/hr, and 0.426 lb PM10/hr.
  - c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations and verify emission factors:
    - i. Methods 1 - 4 of 40 CFR Part 60, Appendix A;
    - ii. for Be - Method 29 or 104 of 40 CFR Part 60, Appendix A;
    - iii. for Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
    - iv. for HCN - Conditional Test Method 33;
    - v. for PM10 - Method 201/201a and 202 of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.
  - d. The tests shall be conducted while this emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. 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, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
  - e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the



tests and submitted to the Ohio EPA Division of Air Pollution Control within 30 days following completion of the tests.

- (2) Compliance with the emission limitations in section b(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitations:

Combined emission limitations for emission units P122, P114 – P117, and the concentrated fluoride operations of P118:

0.0084 lb Be/hr, 0.0368 ton/yr  
0.138 lb Fluoride compounds/hr, 0.605 ton/yr  
0.10 lb HCN/hr, 0.44 ton/yr  
0.426 lb PM10/hr, 1.87 ton/yr

Applicable Compliance Method:

Compliance with the combined lb/hr emission limitations shall be demonstrated by emissions testing requirements in f(1) above.

The combined ton/year limitations were established by multiplying the pounds per hour limitations by 8760 hours per year, and applying a conversion factor of 1 ton/2000 lbs. Therefore, provided compliance is shown with the hourly, compliance with the annual limitation shall be assumed.

b. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the wet ESP stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute" in ORC 3704.03(F)(4)(b) was not necessary because the maximum annual emissions for each toxic air contaminant (HCN and H<sub>2</sub>S from emissions units P113, P114, and P115), as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

It should be noted that the NESHAP and MACT regulations applicable to this facility only address Be emissions therefore each air toxic other than Be is applicable to the "Toxic Air Contaminant Statute".



**4. P115, Decomposition Furnace #3**

**Operations, Property and/or Equipment Description:**

Decomposition Furnace #3

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) g)(1)
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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(D)	See b)(2)b.  <u>The following limitations apply to emission units P114, P115, P116, P117, P118, and P122 combined [see b)(2)a.]:</u>  Combined emissions of Be shall not exceed 0.0084 lb/hr and 0.0368 ton/yr.  Combined emissions of Fluoride compounds shall not exceed 0.138 lb/hr and 0.605 ton/yr.  Combined emissions of HCN shall not exceed 0.10 lb/hr and 0.44 ton/yr.  Combined emissions of PM10 shall not exceed 0.426 lb/hr and 1.87 ton/yr.  Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit.
b.	OAC rule 3745-17-11(B)	See b)(2)c.
c.	OAC rule 3745-17-07(A)	See b)(2)d.
d.	40 CFR 61.32(b)	See term 2 of section B. – FACILITY-WIDE TERMS AND CONDITIONS.
e.		



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR Part 63 Subpart GGGGGG	See b)(2)e.

(2) Additional Terms and Conditions

- a. The combined emission limitations include emissions from the three decomposition furnaces (P114, P115, and P122), two reduction furnaces (P116 and P117), and the concentrated fluoride operations of P118. These sources are all controlled by the same wet electrostatic precipitator (ESP). It should be noted that HCN is only emitted from emission units P114, P115, and P122.
- b. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).
  - i. use of a wet ESP to control emissions from P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118.
  - ii. the wet ESP shall achieve the following control efficiencies and an associated 5% opacity, as a six-minute average.
    - (a) 80% control efficiency for Be;
    - (b) 80% control efficiency for Fluoride compounds;
    - (c) 80% control efficiency for PM10\*\*

\*\*All particulate matter emissions are PM10 and include Be and Fluoride compounds.
  - iii. The combined potential to emit for Be, Fluoride compounds, and PM10 from emission units P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118 is represented by the combined ton per year limitation established under OAC rule 3745-31-05(D). The combined ton per year emission limitations were established using the following maximum uncontrolled emission rates (from process recovery scrubbers) and the respective pollutant control efficiency:
    - (a) For each individual decomposition furnace (P114, P115, and P122):
      - (i) Be - 0.00255 lb/hr, 0.011 ton/yr
      - (ii) Fluoride compounds – 0.0088 lb/hr, 0.0385 ton/yr
      - (iii) PM10 – 0.6 lb/hr, 2.63 tons/yr
    - (b) For reduction furnaces P116 and P117 combined:
      - (i) Be – 0.0345 lb/hr, 0.15 ton/yr



- (ii) Fluoride compounds – 0.033 lb/hr, 0.14 ton/yr
- (iii) PM10 – 0.27 lb/hr, 1.18 tons/yr
- (c) For the concentrated fluoride operations of P118:
  - (i) Be – 0.000008 lb/hr, 0.000035 ton/yr
  - (ii) Fluoride compounds – 0.007 lb/hr, 0.031 ton/yr
  - (iii) PM10 – 0.06 lb/hr, 0.263 ton/yr
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). This determination is based on all emissions of particulate matter being PM10 and the established PM10 limitation being more restrictive than particulate emissions limitation established by OAC rule 3745-17-11(B). Particulate emissions (PE) measured using Method 5 of 40 CFR Part 60, Appendix A would be equivalent to the filterable particulates measured using Method 201/201A of 40 CFR, Part 51, Appendix M. A PM10 limitation is more stringent due to the inclusion of condensable particulate matter measured by Method 202 of 40 CFR, Part 51, Appendix M.
- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. In accordance with 40 CFR 63.11165 the standards and compliance requirements for Primary Beryllium Production Facilities is compliance with the requirements of 40 CFR 61.32 through 40 CFR 61.34 of the National Emission Standards for Beryllium [see term 2 of section B.- FACILITY-WIDE TERMS AND CONDITIONS].

The permittee shall comply with "General Provision" requirements as indicated in 40 CFR 63.11166.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the secondary voltage, in kilovolts, and the current, in milliamps, for each of the fields within the ESP during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the voltage and current within a field in the ESP on a continuous basis.

Whenever the monitored value for the voltage and/or current with a field in the ESP deviates from the value 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 value 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, 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.

Acceptable ranges for the secondary voltage and current for each field within the ESP shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

These ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the ranges based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. In addition, approved revisions to the ranges 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. for each field of the ESP, each period of time when the field was not operating within the acceptable ranges for voltage and current;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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



f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emissions testing shall be conducted within 180 days after initial startup of the emissions units. All three decomposition furnaces (P114, P115, and P122) must be operating along with the following emission units during the test: both reduction furnaces (P116 and P117), and the Wet Plant Concentrated Fluoride Operations of P118. All of these emission units are controlled by the same wet electrostatic precipitator.
  - b. The emission testing shall be conducted to demonstrate compliance with the following limits:
    - i. the combined mass emission limitations of 0.0084 lb Be/hr, 0.138 lb Fluoride compounds/hr, 0.10 lb HCN/hr, and 0.426 lb PM10/hr.
  - c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations and verify emission factors:
    - i. Methods 1 - 4 of 40 CFR Part 60, Appendix A;
    - ii. for Be - Method 29 or 104 of 40 CFR Part 60, Appendix A;
    - iii. for Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
    - iv. for HCN - Conditional Test Method 33;
    - v. for PM10 - Method 201/201a and 202 of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.
  - d. The tests shall be conducted while this emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. 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, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
  - e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the



tests and submitted to the Ohio EPA Division of Air Pollution Control within 30 days following completion of the tests.

- (2) Compliance with the emission limitations in section b(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations:

Combined emission limitations from P122, P114 – P117, and the concentrated fluoride operations of P118:

- 0.0084 lb Be/hr, 0.0368 ton/yr
- 0.138 lb Fluoride compounds/hr, 0.605 ton/yr
- 0.10 lb HCN/hr, 0.44 ton/yr
- 0.426 lb PM10/hr, 1.87 ton/yr

Applicable Compliance Method:

Compliance with the combined lb/hr emission limitations shall be demonstrated by emissions testing requirements in f(1) above.

The combined ton/year limitations were established by multiplying the pounds per hour limitations by 8760 hours per year, and applying a conversion factor of 1 ton/2000 lbs. Therefore, provided compliance is shown with the hourly, compliance with the annual limitation shall be assumed.

- b. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the wet ESP stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

- g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute" in ORC 3704.03(F)(4)(b) was not necessary because the maximum annual emissions for each toxic air contaminant (HCN and H2S from emissions units P113, P114, and P115), as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 03-17418  
**Facility ID:** 0362000009  
**Effective Date:** 9/16/2008

It should be noted that the NESHAP and MACT regulations applicable to this facility only address Be emissions therefore each air toxic other than Be is applicable to the "Toxic Air Contaminant Statute".



**5. P116, Reduction Furnace #1**

**Operations, Property and/or Equipment Description:**

Reduction Furnace #1

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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(D)	See b)(2)b.  <u>The following limitations apply to emission units P114, P115, P116, P117, P118, and P122 combined [see b)(2)a.]:</u>  Combined emissions of Be shall not exceed 0.0084 lb/hr and 0.0368 ton/yr.  Combined emissions of Fluoride compounds shall not exceed 0.138 lb/hr and 0.605 ton/yr.  Combined emissions of HCN shall not exceed 0.10 lb/hr and 0.44 ton/yr.  Combined emissions of PM10 shall not exceed 0.426 lb/hr and 1.87 ton/yr.  Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit.
b.	OAC rule 3745-17-11(B)	See b)(2)c.
c.	OAC rule 3745-17-07(A)	See b)(2)d.
d.	40 CFR 61.32(b)	See Section B2. – FACILITY- WIDE TERMS AND CONDITIONS.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 63 Subpart GGGGGG	See b)(2)e.

(2) Additional Terms and Conditions

- a. The combined emission limitations include emissions from the three decomposition furnaces (P114, P115, and P122), two reduction furnaces (P116 and P117), and the concentrated fluoride operations of P118. These sources are all controlled by the same wet electrostatic precipitator (ESP). It should be noted that HCN is only emitted from emission units P114, P115, and P122.
- b. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).
  - i. use of a wet ESP to control emissions from P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118.
  - ii. the wet ESP shall achieve the following control efficiencies and an associated 5% opacity, as a six-minute average.
    - (a) 80% control efficiency for Be;
    - (b) 80% control efficiency for Fluoride compounds;
    - (c) 80% control efficiency for PM10\*\*

\*\*All particulate matter emissions are PM10 and include Be and Fluoride compounds.
  - iii. The combined potential to emit for Be, Fluoride compounds, and PM10 from emission units P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118 is represented by the combined ton per year limitation established under OAC rule 3745-31-05(D). The combined ton per year emission limitations were established using the following maximum uncontrolled emission rates (from process recovery scrubbers) and the respective pollutant control efficiency:
    - (a) For each individual decomposition furnace (P114, P115, and P122):
      - (i) Be - 0.00255 lb/hr, 0.011 ton/yr
      - (ii) Fluoride compounds – 0.0088 lb/hr, 0.0385 ton/yr
      - (iii) PM10 – 0.6 lb/hr, 2.63 tons/yr
    - (b) For reduction furnaces P116 and P117 combined:
      - (i) Be – 0.0345 lb/hr, 0.15 ton/yr



- (ii) Fluoride compounds – 0.033 lb/hr, 0.14 ton/yr
- (iii) PM10 – 0.27 lb/hr, 1.18 tons/yr
- (c) For the concentrated fluoride operations of P118:
  - (i) Be – 0.000008 lb/hr, 0.000035 ton/yr
  - (ii) Fluoride compounds – 0.007 lb/hr, 0.031 ton/yr
  - (iii) PM10 – 0.06 lb/hr, 0.263 ton/yr
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). This determination is based on all emissions of particulate matter being PM10 and the established PM10 limitation being more restrictive than particulate emissions limitation established by OAC rule 3745-17-11(B). Particulate emissions (PE) measured using Method 5 of 40 CFR Part 60, Appendix A would be equivalent to the filterable particulates measured using Method 201/201A of 40 CFR, Part 51, Appendix M. A PM10 limitation is more stringent due to the inclusion of condensable particulate matter measured by Method 202 of 40 CFR, Part 51, Appendix M.
- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. In accordance with 40 CFR 63.11165 the standards and compliance requirements for Primary Beryllium Production Facilities is compliance with the requirements of 40 CFR 61.32 through 40 CFR 61.34 of the National Emission Standards for Beryllium (See Section B2- FACILITY-WIDE TERMS AND CONDITIONS).

The permittee shall comply with "General Provision" requirements as indicated in 40 CFR 63.11166.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the secondary voltage, in kilovolts, and the current, in milliamps, for each of the fields within the ESP during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the voltage and current within a field in the ESP on a continuous basis.

Whenever the monitored value for the voltage and/or current with a field in the ESP deviates from the value 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 value 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, 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.

Acceptable ranges for the secondary voltage and current for each field within the ESP shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

These ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the ranges based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. In addition, approved revisions to the ranges 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. for each field of the ESP, each period of time when the field was not operating within the acceptable ranges for voltage and current;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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



f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emissions testing shall be conducted within 180 days after initial startup of the emissions units. Both reduction furnaces must be operating along with the following emission units during the test: three decomposition furnaces (P114, P115, and P122) and the Wet Plant Concentrated Fluoride Operations of P118. All of these emission units are controlled by the same wet electrostatic precipitator.
  - b. The emission testing shall be conducted to demonstrate compliance with the following limits:
    - i. the combined mass emission limitations of 0.0084 lb Be/hr, 0.138 lb Fluoride compounds/hr, 0.10 lb HCN/hr, and 0.426 lb PM10/hr.
  - c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations and verify emission factors:
    - i. Methods 1 - 4 of 40 CFR Part 60, Appendix A;
    - ii. for Be - Method 29 or 104 of 40 CFR Part 60, Appendix A;
    - iii. for Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
    - iv. for HCN - Conditional Test Method 33;
    - v. for PM10 - Method 201/201a and 202 of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.
  - d. The tests shall be conducted while this emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. 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, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
  - e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the



tests and submitted to the Ohio EPA Division of Air Pollution Control within 30 days following completion of the tests.

(2) Compliance with the emission limitations in section b(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitations:

Combined emission limitations from P122, P114 – P117, and the concentrated fluoride operations of P118:

- 0.0084 lb Be/hr, 0.0368 ton/year
- 0.138 lb Fluoride compounds/hr, 0.605 ton/year
- 0.10 lb HCN/hr, 0.44 ton/year
- 0.426 lb PM10/hr, 1.87 ton/year

Applicable Compliance Method:

Compliance with the combined lb/hr emission limitations shall be demonstrated by emissions testing requirements in f(1) above.

The combined ton/year limitations were established by multiplying the pounds per hour limitations by 8760 hours per year, and applying a conversion factor of 1 ton/2000 lbs. Therefore, provided compliance is shown with the hourly, compliance with the annual limitation shall be assumed.

b. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the wet ESP stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

g) Miscellaneous Requirements

(1) None.



**6. P117, Reduction Furnace #2**

**Operations, Property and/or Equipment Description:**

Reduction Furnace #2

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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(D)	<p><u>The following limitations apply to emission units P114, P115, P116, P117, P118, and P122 combined [see b)(2)a.]:</u></p> <p>Combined emissions of Be shall not exceed 0.0084 lb/hr and 0.0368 ton/yr.</p> <p>Combined emissions of Fluoride compounds shall not exceed 0.138 lb/hr and 0.605 ton/yr.</p> <p>Combined emissions of HCN shall not exceed 0.10 lb/hr and 0.44 ton/yr.</p> <p>Combined emissions of PM10 shall not exceed 0.426 lb/hr and 1.87 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit.</p>
b.	OAC rule 3745-17-11(B)	See b)(2)c.
c.	OAC rule 3745-17-07(A)	See b)(2)d.
d.	40 CFR 61.32(b)	See term 2 of section B. – FACILITY-WIDE TERMS AND CONDITIONS.
e.	40 CFR Part 63 Subpart GGGGGG	See b)(2)e.



(2) Additional Terms and Conditions

- a. The combined emission limitations include emissions from the three decomposition furnaces (P114, P115, and P122), two reduction furnaces (P116 and P117), and the concentrated fluoride operations of P118. These sources are all controlled by the same wet electrostatic precipitator (ESP). It should be noted that HCN is only emitted from emission units P114, P115, and P122.
- b. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).
  - i. use of a wet ESP to control emissions from P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118.
  - ii. the wet ESP shall achieve the following control efficiencies and an associated 5% opacity, as a six-minute average.
    - (a) 80% control efficiency for Be;
    - (b) 80% control efficiency for Fluoride compounds;
    - (c) 80% control efficiency for PM10\*\*

\*\*All particulate matter emissions are PM10 and include Be and Fluoride compounds.
  - iii. The combined potential to emit for Be, Fluoride compounds, and PM10 from emission units P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118 is represented by the combined ton per year limitation established under OAC rule 3745-31-05(D). The combined ton per year emission limitations were established using the following maximum uncontrolled emission rates (from process recovery scrubbers) and the respective pollutant control efficiency:
    - (a) For each individual decomposition furnace (P114, P115, and P122):
      - (i) Be - 0.00255 lb/hr, 0.011 ton/yr
      - (ii) Fluoride compounds – 0.0088 lb/hr, 0.0385 ton/yr
      - (iii) PM10 – 0.6 lb/hr, 2.63 tons/yr
    - (b) For reduction furnaces P116 and P117 combined:
      - (i) Be – 0.0345 lb/hr, 0.15 ton/yr
      - (ii) Fluoride compounds – 0.033 lb/hr, 0.14 ton/yr
      - (iii) PM10 – 0.27 lb/hr, 1.18 tons/yr



- (c) For the concentrated fluoride operations of P118:
  - (i) Be – 0.000008 lb/hr, 0.000035 ton/yr
  - (ii) Fluoride compounds – 0.007 lb/hr, 0.031 ton/yr
  - (iii) PM10 – 0.06 lb/hr, 0.263 ton/yr
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). This determination is based on all emissions of particulate matter being PM10 and the established PM10 limitation being more restrictive than particulate emissions limitation established by OAC rule 3745-17-11(B). Particulate emissions (PE) measured using Method 5 of 40 CFR Part 60, Appendix A would be equivalent to the filterable particulates measured using Method 201/201A of 40 CFR, Part 51, Appendix M. A PM10 limitation is more stringent due to the inclusion of condensable particulate matter measured by Method 202 of 40 CFR, Part 51, Appendix M.
- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. In accordance with 40 CFR 63.11165 the standards and compliance requirements for Primary Beryllium Production Facilities is compliance with the requirements of 40 CFR 61.32 through 40 CFR 61.34 of the National Emission Standards for Beryllium (See Section B2- FACILITY-WIDE TERMS AND CONDITIONS).

The permittee shall comply with "General Provision" requirements as indicated in 40 CFR 63.11166.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the secondary voltage, in kilovolts, and the current, in milliamps, for each of the fields within the ESP during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the voltage and current within a field in the ESP on a continuous basis.

Whenever the monitored value for the voltage and/or current with a field in the ESP deviates from the value 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 value 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, 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.

Acceptable ranges for the secondary voltage and current for each field within the ESP shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

These ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the ranges based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. In addition, approved revisions to the ranges 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. for each field of the ESP, each period of time when the field was not operating within the acceptable ranges for voltage and current;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

f) Testing Requirements

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



- a. The emissions testing shall be conducted within 180 days after initial startup of the emissions units. Both reduction furnaces must be operating along with the following emission units during the test: three decomposition furnaces (P114, P115, and P122) and the Wet Plant Concentrated Fluoride Operations of P118. All of these emission units are controlled by the same wet electrostatic precipitator.
- b. The emission testing shall be conducted to demonstrate compliance with the following limits:
  - i. the combined mass emission limitations of 0.0084 lb Be/hr, 0.138 lb Fluoride compounds/hr, 0.10 lb HCN/hr, and 0.426 lb PM10/hr.
- c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations and verify emission factors:
  - i. Methods 1 - 4 of 40 CFR Part 60, Appendix A;
  - ii. for Be - Method 29 or 104 of 40 CFR Part 60, Appendix A;
  - iii. for Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
  - iv. for HCN - Conditional Test Method 33;
  - v. for PM10 - Method 201/201a and 202 of 40 CFR Part 51, Appendix M.

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

- d. The tests shall be conducted while this emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. 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, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
  - e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Division of Air Pollution Control within 30 days following completion of the tests.
- (2) Compliance with the emission limitations in section b(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:



a. Emission Limitations:

Combined emission limitations from P122, P114 – P117, and the concentrated fluoride operations of P118:

- 0.0084 lb Be/hr, 0.0368 ton/yr
- 0.138 lb Fluoride compounds/hr, 0.605 ton/yr
- 0.10 lb HCN/hr, 0.44 ton/yr
- 0.426 lb PM10/hr, 1.87 ton/yr

Applicable Compliance Method:

Compliance with the combined lb/hr emission limitations shall be demonstrated by emissions testing requirements in f(1) above.

The combined ton/year limitations were established by multiplying the pounds per hour limitations by 8760 hours per year, and applying a conversion factor of 1 ton/2000 lbs. Therefore, provided compliance is shown with the hourly, compliance with the annual limitation shall be assumed.

b. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the wet ESP stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

g) Miscellaneous Requirements

- (1) None.



**7. P118, Wet Plant**

**Operations, Property and/or Equipment Description:**

Wet Plant - Pebble Plant

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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(D)	<p><u>Wet Plant Concentrated Fluoride Operations:</u></p> <p>The following limitations apply to emission units P114, P115, P116, P117, 122, and the wet plant concentrated fluoride operations of P118 combined [see b)(2)a.]:</p> <p>Combined emissions of Be shall not exceed 0.0084 lb/hr and 0.0368 ton/yr.</p> <p>Combined emissions of Fluoride compounds shall not exceed 0.138 lb/hr and 0.605 ton/yr.</p> <p>Combined emissions of HCN shall not exceed 0.10 lb/hr and 0.44 ton/yr.</p> <p>Combined emissions of PM10 shall not exceed 0.426 lb/hr and 1.87 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit.</p> <p><u>Wet Plant Raw Material Handling:</u></p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.0003 grain per dry standard cubic foot (dscf) and 0.06 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the baghouse stack serving this operation</p> <p>See b)(2)c.</p>
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	Wet Plant Miscellaneous Operations: See b)(2)d.
c.	OAC rule 3745-17-11(B)	See b)(2)e.
d.	OAC rule 3745-17-07(A)	See b)(2)f.
e.	40 CFR 61.32(b)	See term 2 of section B. – FACILITY-WIDE TERMS AND CONDITIONS.

(2) Additional Terms and Conditions

- a. The combined emission limitations include emissions from the three decomposition furnaces (P114, P115, and P122), two reduction furnaces (P116 and P117), and the concentrated fluoride operations of P118. These sources are all controlled by the same wet electrostatic precipitator (ESP). It should be noted that HCN is only emitted from emission units P114, P115, and P122.
- b. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).
  - i. use of a wet ESP to control emissions from P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118.
  - ii. the wet ESP shall achieve the following control efficiencies and an associated 5% opacity, as a six-minute average.
    - (a) 80% control efficiency for Be;
    - (b) 80% control efficiency for Fluoride compounds;
    - (c) 80% control efficiency for PM10\*\*

\*\*All particulate matter emissions are PM10 and include Be and Fluoride compounds.



- iii. The combined potential to emit for Be, Fluoride compounds, and PM10 from emission units P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118 is represented by the combined ton per year limitation established under OAC rule 3745-31-05(D). The combined ton per year emission limitations were established using the following maximum uncontrolled emission rates (from process recovery scrubbers) and the respective pollutant control efficiency:
  - (a) For each individual decomposition furnace (P114, P115, and P122):
    - (i) Be - 0.00255 lb/hr, 0.011 ton/yr
    - (ii) Fluoride compounds – 0.0088 lb/hr, 0.0385 ton/yr
    - (iii) PM10 – 0.6 lb/hr, 2.63 tons/yr
  - (b) For reduction furnaces P116 and P117 combined:
    - (i) Be – 0.0345 lb/hr, 0.15 ton/yr
    - (ii) Fluoride compounds – 0.033 lb/hr, 0.14 ton/yr
    - (iii) PM10 – 0.27 lb/hr, 1.18 tons/yr
  - (c) For the concentrated fluoride operations of P118:
    - (i) Be – 0.000008 lb/hr, 0.000035 ton/yr
    - (ii) Fluoride compounds – 0.007 lb/hr, 0.031 ton/yr
    - (iii) PM10 – 0.06 lb/hr, 0.263 ton/yr
- c. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).
  - i. for raw material handling operations - use of a baghouse achieving a maximum outlet concentration of 0.0003 grains/dscf of PM10\* and an associated 5% opacity, as a six-minute average.

\*All emissions of particulate matter are PM10.

The potential to emit for raw material handling operations is 0.06 ton PM10/year and was determined by multiplying the maximum outlet concentration of 0.0003 grains PM10/dscf by a maximum volumetric air flow of 5,330 acfm, applying the appropriate conversion factors of 7000 grains/lb, 1 dscf/1acfm, and 60 minutes/hr and multiplying by 8760 hrs/yr and dividing by 2000 lbs/ton.

- d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM10 emissions from the Wet Plant Miscellaneous Operations, since the uncontrolled potential to emit for PM10\*\* is less than ten



tons per year. The uncontrolled potential to emit for Wet Plant Miscellaneous Operations is 0.23 ton PM10/yr and is based on mass balance calculations.

The potential to emit for Fluoride compounds for Wet Plant Miscellaneous Operations is 0.00021 ton/yr based on mass balance calculations and is being presented for informational purposes.

\*\*All particulate matter emissions are PM10 and include Fluoride compounds.

- e. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). This determination is based on all emissions of particulate matter being PM10 and the established PM10 limitation being more restrictive than particulate emissions limitation established by OAC rule 3745-17-11(B). Particulate emissions (PE) measured using Method 5 of 40 CFR Part 60, Appendix A would be equivalent to the filterable particulates measured using Method 201/201A of 40 CFR, Part 51, Appendix M. A PM10 limitation is more stringent due to the inclusion of condensable particulate matter measured by Method 202 of 40 CFR, Part 51, Appendix M.
  - f. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- c) Operational Restrictions
- (1) None
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the secondary voltage, in kilovolts, and the current, in milliamperes, for each of the fields within the ESP during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the voltage and current within a field in the ESP on a continuous basis.

Whenever the monitored value for the voltage and/or current with a field in the ESP deviates from the value 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 value 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, 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.

Acceptable ranges for the secondary voltage and current for each field within the ESP shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

These ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the ranges based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. In addition, approved revisions to the ranges 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.

- (2) The permittee shall document all times the baghouse serving this emissions unit was not employed when the emissions unit was in operation.
- (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop, in inches of water, 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 shall record the pressure drop on a daily basis.

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.

Except for an initial operating period after filter media replacement to attain design filtering efficiency, the acceptable range for the pressure drop across the baghouse is 2 to 4 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 NWDO. The permittee may request



revisions to the pressure drop range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the pressure drop range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative modification.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. for each field of the ESP, each period of time when the field was not operating within the acceptable ranges for voltage and current;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

- (2) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. each period of time when the pressure drop across the baghouse field was outside of the acceptable range;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

f) Testing Requirements

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



- a. The emissions testing shall be conducted within 180 days after initial startup of the emissions units. The Wet Plant Concentrated Fluoride Operations of P118 must be operating along with the following emission units during the test: three decomposition furnaces (P114, P115, and P122) and both reduction furnaces (P116 and P117). All of these emission units are controlled by the same wet electrostatic precipitator.
- b. The emission testing shall be conducted to demonstrate compliance with the following limits:
  - i. the combined mass emission limitations of 0.0084 lb Be/hr, 0.138 lb Fluoride compounds/hr, 0.10 lb HCN/hr, and 0.426 lb PM10/hr.
- c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations and verify emission factors:
  - i. Methods 1 - 4 of 40 CFR Part 60, Appendix A;
  - ii. for Be - Method 29 or 104 of 40 CFR Part 60, Appendix A;
  - iii. for Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
  - iv. for HCN - Conditional Test Method 33;
  - v. for PM10 - Method 201/201a and 202 of 40 CFR Part 51, Appendix M.

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

- d. The tests shall be conducted while this emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. 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, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
  - e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Division of Air Pollution Control within 30 days following completion of the tests.
- (2) Compliance with the emission limitations in section b(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:



a. Emission Limitations:

Combined emission limitations from P122, P114 – P117, and the concentrated fluoride operations of P118:

0.0084 lb Be/hr, 0.0368 ton/yr  
0.138 lb Fluoride compounds/hr, 0.605 ton/yr  
0.10 lb HCN/hr, 0.44 ton/yr  
0.426 lb PM10/hr, 1.87 ton/yr

Applicable Compliance Method:

Compliance with the combined lb/hr emission limitations shall be demonstrated by emissions testing requirements in f(1) above.

The combined ton/year limitations were established by multiplying the pounds per hour limitations by 8760 hours per year, and applying a conversion factor of 1 ton/2000 lbs. Therefore, provided compliance is shown with the hourly, compliance with the annual limitation shall be assumed.

b. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the wet ESP stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

c. Emission Limitations: for Wet Plant Raw Material Handling

0.0003 gr PM10/dscf, 0.06 ton PM10 /yr

Applicable Compliance Method:

The 0.0003 gr PM10/dscf emission limitation was established in accordance with the maximum outlet grain loading concentration for the baghouse. The annual limitation was established by multiplying the maximum baghouse outlet concentration of 0.0003 gr/dscf, the maximum volumetric air flow rate (5,330 acfm) contributed from this emissions unit to the baghouse, and using the following conversion factors in order to convert to tons per year: 1 lb/7000 grains, 60 minutes/hour, 8760 hours/year and 1 ton/2000 lbs. Therefore, provided compliance is demonstrated with the 0.0003 gr PM10/dscf limitation, compliance with the annual limitation shall be assumed.

If required, the permittee shall demonstrate compliance with the gr PM10/dscf by testing in accordance with Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 03-17418  
**Facility ID:** 0362000009  
**Effective Date:** 9/16/2008

d. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the baghouse stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

g) Miscellaneous Requirements

(1) None.



**8. P119, Material Handling System**

**Operations, Property and/or Equipment Description:**

Material Handling System - Pebble Plant

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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)(a)(ii)	See b)(2)a.
b.	OAC rule 3745-17-11(B)	None, See b)(2)b.
c.	OAC rule 3745-17-07(A)	None, See b)(2)c.
d.	40 CFR 61.32(b)	See term 2 of section B. – FACILITY-WIDE TERMS AND CONDITIONS.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM10 emissions from this emissions unit since the uncontrolled potentials to emit for PM10\* is less than ten tons per year.
 

The uncontrolled potential to emit is 0.0042 ton PM10/yr and is based on mass balance calculations.

The potential to emit for Be is 0.00057 ton/yr and for Fluoride compounds is 0.0028 ton/yr based on mass balance calculations and is being presented for informational purposes.

\*All particulate matter emissions are PM10 and include Be and Fluoride compounds.
- b. The uncontrolled mass rate of particulate emissions from P119 is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), this emissions unit is exempt from the requirements of OAC rule 3745-17-11(B)(2).



c. This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.



**9. P120, Furnace Rebuild Operation**

**Operations, Property and/or Equipment Description:**

Furnace Rebuild Operation - Pebble Plant

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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(D)	Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.00007 grain per dry standard cubic foot (dscf) and 0.022 ton/yr.  Beryllium (Be) emissions shall not exceed 0.00051 lb/hr and 0.0022 ton/yr.  Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average.  See b)(2)a.
b.	OAC rule 3745-17-11(B)	See b)(2)b.
c.	OAC rule 3745-17-07(A)	See b)(2)c.
d.	40 CFR 61.32(b)	See term 2 of section B. – FACILITY-WIDE TERMS AND CONDITIONS.

(2) Additional Terms and Conditions

- a. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).



- i. use of a baghouse achieving a maximum outlet concentration of 0.00007 grains/dscf of particulate matter 10 microns or less in size PM10\* and an associated 5% opacity, as a six-minute average.

The potential to emit for this emissions unit is 0.022 ton PM10/year and was determined by multiplying the maximum outlet concentration of 0.00007 grains PM10/dscf by a maximum volumetric air flow of 8,500 acfm, applying the appropriate conversion factors of 7000 grains/lb, 1 dscf/1acfm, and 60 minutes/hr and multiplying by 8760 hrs/yr and dividing by 2000 lbs/ton.

The potential to emit for this emissions unit is 0.0022 ton Be/year and was determined by multiplying the maximum outlet concentration of 0.00007 grains PM10/dscf by a maximum volumetric air flow of 8,500 acfm, and a maximum 10 % Be content in the particulates and applying the appropriate conversion factors of 7000 grains/lb, 1 dscf/1acfm, and 60 minutes/hr and multiplying by 8760 hrs/yr and dividing by 2000 lbs/ton.

\*All particulate matter emissions are PM10 and include Be.

- b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). This determination is based on all emissions of particulate matter being PM10 and the established PM10 limitation being more restrictive than particulate emissions limitation established by OAC rule 3745-17-11(B). Particulate emissions (PE) measured using Method 5 of 40 CFR Part 60, Appendix A would be equivalent to the filterable particulates measured using Method 201/201A of 40 CFR, Part 51, Appendix M. A PM10 limitation is more stringent due to the inclusion of condensible particulate matter measured by Method 202 of 40 CFR, Part 51, Appendix M.
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).

c) Operational Restrictions

- (1) None

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall document all times the baghouse serving this emissions unit was not employed when the emissions unit was in operation.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop, in inches of water, 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 shall record the pressure drop on a daily basis.

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.

Except for an initial operating period after filter media replacement to attain design filtering efficiency, the acceptable range for the pressure drop across the baghouse is 2 to 4 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 NWDO. The permittee may request revisions to the pressure drop range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the pressure drop range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative modification.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. each period of time when the pressure drop across the baghouse field was outside of the acceptable range;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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



f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emissions testing shall be conducted within 180 days after initial startup of the emissions unit.
  - b. The emission testing shall be conducted to demonstrate compliance with the following limits:
    - i. the mass emission limitations of 0.00051 lb Be/hr, and 0.00007 gr/dscf for PM10.
  - c. The following test methods shall be employed to demonstrate compliance with the above emission limitations and verify emission factors:
    - i. Methods 1 - 4 of 40 CFR Part 60, Appendix A;
    - ii. for Be - Method 29 or 104 of 40 CFR Part 60, Appendix A;
    - iii. for PM10 - Method 201/201a and 202 of 40 CFR Part 51, Appendix M.

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

  - d. The tests shall be conducted while this emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. 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, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
  - e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Division of Air Pollution Control within 30 days following completion of the tests.

- (2) Compliance with the emission limitations in Section b(1) of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:  
  
0.00051 lb Be/hr, 0.0022 ton Be/yr



Applicable Compliance Method:

Compliance with the lb/hr emissions limitations shall be demonstrated by emissions testing requirements in f(1) above.

The ton/year limitation was established by multiplying the pounds per hour limitation by 8760 hours per year, and applying a conversion factor of 1 ton/2000 lbs. Therefore, provided compliance is shown with the hourly, compliance with the annual limitation shall be assumed.

b. Emission Limitations:

0.00007 gr PM10/dscf, 0.022 ton PM10 /yr

Applicable Compliance Method:

Compliance with the outlet grain loading emissions limitation shall be demonstrated by emissions testing requirements in A.V.1 above.

The ton/year limitation was established by multiplying the outlet grain loading by a maximum volumetric air flow of 8,500 acfm, applying the appropriate conversion factors of 7000 grains/lb, 1 dscf/1acfm, and 60 minutes/hr and multiplying by 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the outlet grain loading limitation, compliance with the annual limitation shall be assumed.

c. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

g) Miscellaneous Requirements

(1) None.



**10. P121, Lab Hoods**

**Operations, Property and/or Equipment Description:**

Lab Hoods - Pebble Plant

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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)(a)(ii)	See b)(2)a.
b.	OAC rule 3745-17-11(B)	None, See b)(2)b.
c.	OAC rule 3745-17-07(A)	None, See b)(2)c.
d.	40 CFR 61.32(b)	See term 2 of section B. – FACILITY-WIDE TERMS AND CONDITIONS.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM10 emissions from this emissions unit since the uncontrolled potentials to emit for PM10\* is less than ten tons per year.
 

The uncontrolled potential to emit is 0.0066 ton PM10/yr and is based on mass balance calculations.

The potential to emit for Be is 0.00048 ton/yr and is based on mass balance calculations and is being presented for informational purposes.

All particulate matter emissions are PM10 and include Be.
- b. The uncontrolled mass rate of particulate emissions from P121 is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), this emissions unit is exempt from the requirements of OAC rule 3745-17-11(B)(2).
- c. This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.



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- c) Operational Restrictions
  - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) None.
- e) Reporting Requirements
  - (1) None.
- f) Testing Requirements
  - (1) None.
- g) Miscellaneous Requirements
  - (1) None.



**11. P122, Decomposition Furnace No. 1**

**Operations, Property and/or Equipment Description:**

Decomposition Furnace No. 1

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - g)(1)
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(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. 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(D)	See b)(2)b.  <u>The following limitations apply to emission units P114, P115, P116, P117, P118, and P122 combined [see b)(2)a.]:</u>  Combined emissions of Be shall not exceed 0.0084 lb/hr and 0.0368 ton/yr.  Combined emissions of Fluoride compounds shall not exceed 0.138 lb/hr and 0.605 ton/yr.  Combined emissions of HCN shall not exceed 0.10 lb/hr and 0.44 ton/yr.  Combined emissions of PM10 shall not exceed 0.426 lb/hr and 1.87 ton/yr.  Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit
b.	OAC rule 3745-17-11(B)	See b)(2)c.
c.	OAC rule 3745-17-07(A)	See b)(2)d.
d.	40 CFR 61.32(b)	See term 2 of section B – FACILITY-WIDE TERMS AND CONDITIONS



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 63 Subpart GGGGGG	See b)(2)e.

(2) Additional Terms and Conditions

- a. The combined emission limitation includes emissions from the three decomposition furnaces (P114, P115, and P122), two reduction furnaces (P116 and P117), and the concentrated fluoride operations of P118. These sources are all controlled by the same wet electrostatic precipitator (ESP). It should be noted that HCN is only emitted from emission units P114, P115, and P122.
- b. Permit to Install 03-17418 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).
  - i. use of a wet ESP to control emissions from P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118.
  - ii. the wet ESP shall achieve the following control efficiencies and an associated 5% opacity, as a six-minute average.
    - (a) 80% control efficiency for Be;
    - (b) 80% control efficiency for Fluoride compounds;
    - (c) 80% control efficiency for PM10\*\*

\*\*All particulate matter emissions are PM10 and include Be and Fluoride compounds.
  - iii. The combined potential to emit for Be, Fluoride compounds, and PM10 from emission units P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118 is represented by the combined ton per year limitation established under OAC rule 3745-31-05(D). The combined ton per year emission limitations were established using the following maximum uncontrolled emission rates (from process recovery scrubbers) and the respective pollutant control efficiency:
    - (a) For each individual decomposition furnace (P114, P115, and P122):
      - (i) Be - 0.00255 lb/hr, 0.011 ton/yr
      - (ii) Fluoride compounds – 0.0088 lb/hr, 0.0385 ton/yr
      - (iii) PM10 – 0.6 lb/hr, 2.63 tons/yr
    - (b) For reduction furnaces P116 and P117 combined:



- (i) Be – 0.0345 lb/hr, 0.15 ton/yr
  - (ii) Fluoride compounds – 0.033 lb/hr, 0.14 ton/yr
  - (iii) PM10 – 0.27 lb/hr, 1.18 tons/yr
- (c) For the concentrated fluoride operations of P118:
- (i) Be – 0.000008 lb/hr, 0.000035 ton/yr
  - (ii) Fluoride compounds – 0.007 lb/hr, 0.031 ton/yr
  - (iii) PM10 – 0.06 lb/hr, 0.263 ton/yr
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). This determination is based on all emissions of particulate matter being PM10 and the established PM10 limitation being more restrictive than particulate emissions limitation established by OAC rule 3745-17-11(B). Particulate emissions (PE) measured using Method 5 of 40 CFR Part 60, Appendix A would be equivalent to the filterable particulates measured using Method 201/201A of 40 CFR, Part 51, Appendix M. A PM10 limitation is more stringent due to the inclusion of condensible particulate matter measured by Method 202 of 40 CFR, Part 51, Appendix M.
- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. In accordance with 40 CFR 63.11165 the standards and compliance requirements for Primary Beryllium Production Facilities is compliance with the requirements of 40 CFR 61.32 through 40 CFR 61.34 of the National Emission Standards for Beryllium (See term 2 of section B - FACILITY-WIDE TERMS AND CONDITIONS).

The permittee shall comply with "General Provision" requirements as indicated in 40 CFR 63.11166.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the secondary voltage, in kilovolts, and the current, in milliamps, for each of the fields within the ESP during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the voltage and current within a field in the ESP on a continuous basis.

Whenever the monitored value for the voltage and/or current with a field in the ESP deviates from the value 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 value 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, 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.

Acceptable ranges for the secondary voltage and current for each field within the ESP shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

These ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the ranges based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. In addition, approved revisions to the ranges 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. for each field of the ESP, each period of time when the field was not operating within the acceptable ranges for voltage and current;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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



f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emissions testing shall be conducted within 180 days after initial startup of the emissions units. All three decomposition furnaces (P114, P115, and P122) must be operating along with the following emission units during the test: both reduction furnaces (P116 and P117), and the Wet Plant Concentrated Fluoride Operations (P118). All of these emission units are controlled by the same wet electrostatic precipitator.
  - b. The emission testing shall be conducted to demonstrate compliance with the following limits:
    - i. the combined mass emission limitations of 0.0084 lb Be/hr, 0.138 lb Fluoride compounds/hr, 0.10 lb HCN/hr, and 0.426 lb PM10/hr.
  - c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations and verify emission factors:
    - i. Methods 1 - 4 of 40 CFR Part 60, Appendix A;
    - ii. for Be - Method 29 or 104 of 40 CFR Part 60, Appendix A;
    - iii. for Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
    - iv. for HCN - Conditional Test Method 33;
    - v. for PM10 - Method 201/201a and 202 of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.
  - d. The tests shall be conducted while this emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. 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, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
  - e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the



tests and submitted to the Ohio EPA Division of Air Pollution Control within 30 days following completion of the tests.

- (2) Compliance with the emission limitations in section b(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitations:

Combined emission limitations from P122, P114 – P117, and the concentrated fluoride operations of P118:

0.0084 lb Be/hr, 0.0368 ton/year  
0.138 lb Fluoride compounds/hr, 0.605 ton/year  
0.10 lb HCN/hr, 0.44 ton/year  
0.426 lb PM10/hr, 1.87 ton/yr

Applicable Compliance Method:

Compliance with the lb/hr emission limitations shall be demonstrated by emissions testing requirements in f(1) above.

The ton/year limitations were established by multiplying the pounds per hour limitation by 8760 hours per year, and applying a conversion factor of 1 ton/2000 lbs. Therefore, provided compliance is shown with the hourly, compliance with the annual limitation shall be assumed.

The combined emission limitations were established by adding the individual emission limitations for P122, P114 – P117, and the concentrated fluoride operations of P118. Therefore, provided compliance is shown with the combined emission limitations, compliance with the individual emission unit limitations will be assumed.

b. Emission Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average from the wet ESP stack serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute" in ORC 3704.03(F)(4)(b) was not necessary because the maximum annual emissions for each toxic air contaminant (HCN and H<sub>2</sub>S from emissions units P113, P114, and P115), as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby



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advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

It should be noted that the NESHAP and MACT regulations applicable to this facility only address Be emissions therefore each air toxic other than Be is applicable to the "Toxic Air Contaminant Statute".