



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
OTTAWA COUNTY**

**CERTIFIED MAIL**

Street Address:

Mailing Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Lazarus Gov.  
Center

**Application No:** 03-17418

**Fac ID:** 0362000009

**DATE:** 6/5/2008

Brush Wellman Inc  
Troy Kajfasz  
14710 W Portage River Rd S  
Elmore, OH 43416-9502

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$2600** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

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

CC: USEPA

NWDO

Toledo Metro Area Council of Gov.

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PUBLIC NOTICE  
ISSUANCE OF DRAFT PERMIT TO INSTALL **03-17418** FOR AN AIR CONTAMINANT SOURCE  
FOR **Brush Wellman Inc**

On 6/5/2008 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Brush Wellman Inc**, located at **14710 W Portage River Rd S, Elmore**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 03-17418:

**PTI for the installation of 5 furnaces, two boilers and other sources associated with the new Pebble Plant.**

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

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



**Permit To Install  
Terms and Conditions**

**Issue Date: To be entered upon final issuance  
Effective Date: To be entered upon final issuance**

**DRAFT PERMIT TO INSTALL 03-17418**

Application Number: 03-17418  
Facility ID: 0362000009  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Brush Wellman Inc  
Person to Contact: Troy Kajfasz  
Address: 14710 W Portage River Rd S  
Elmore, OH 434169502

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**14710 W Portage River Rd S  
Elmore, Ohio**

Description of proposed emissions unit(s):  
**PTI for the installation of 5 furnaces, two boilers and other sources associated with the new Pebble Plant.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

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Chris Korleski  
Director

Brush Wellman Inc  
PTI Application: 03-17418  
Issued: To be entered upon final issuance  
Part I - GENERAL TERMS AND CONDITIONS

Facility ID: 0362000009

**A. State and Federally Enforceable Permit-To-Install General Terms and Conditions**

**1. Monitoring and Related Recordkeeping 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:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. 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:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. 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 appropriate Ohio EPA District Office or local air agency. The written

**Brush Wellman Inc**  
**PTI Application: 03-17418**

**Facility ID: 036200009**

**Issued: To be entered upon final issuance**

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 B.9 below if no deviations occurred during the quarter.

- iii. 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 appropriate Ohio EPA District Office or local air agency 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.
  - iv. If this permit is for an emissions unit located at a Title V facility, then 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.

## **2. 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 appropriate Ohio EPA District Office or local air agency 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).

## **3. 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

**Brush Wellman Inc**  
**PTI Application: 03-17418**

**Facility ID: 036200009**

**Issued: To be entered upon final issuance**

permittee shall comply with the requirement to register such a plan.

#### **4. 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.

#### **5. Severability Clause**

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.

#### **6. 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.

**Brush Wellman Inc**

**PTI Application: 03-17418**

**Issued: To be entered upon final issuance**

**Facility ID: 0362000009**

**7. 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.

**Brush Wellman Inc**  
**PTI Application: 03-17418**

**Facility ID: 036200009**

**Issued: To be entered upon final issuance**

**8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that 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. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

**9. Compliance Requirements**

- a. 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.
- b. 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:
  - i. 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.
  - ii. 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.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. 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.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency 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:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

**Brush Wellman Inc**  
**PTI Application: 03-17418**  
**Issued: To be entered upon final issuance**

**Facility ID: 0362000009**

- ii. 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.

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

- a. If 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).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

#### **11. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

#### **12. 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.

#### **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in

**Brush Wellman Inc**

**PTI Application: 03-17418**

**Issued: To be entered upon final issuance  
this permit.**

**Facility ID: 0362000009**

**Brush Wellman Inc**

**Facility ID: 0362000009**

**PTI Application: 03-17418**

**Issued: To be entered upon final issuance**

**B. State Only Enforceable Permit-To-Install General Terms and Conditions**

**1. Compliance Requirements**

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.

**2. 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 appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from 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 appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**3. Permit Transfers**

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

**4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing 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

**Brush Wellman Inc****Facility ID: 0362000009****PTI Application: 03-17418****Issued: To be entered upon final issuance**

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

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

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.

**6. 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.

**7. 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).

**8. Construction Compliance Certification**

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but

Brush Wellman Inc

Facility ID: 0362000009

PTI Application: 03-17418

Issued: To be entered upon final issuance  
prior to startup of the source.

**9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

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.

**C. Permit-To-Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PM10	3.0458
Be	0.039892
Fluoride Compounds	0.60711
HCN	0.45
H <sub>2</sub> S	0.053
NO <sub>x</sub>	11.0
CO	9.24
VOC	0.6
SO <sub>2</sub>	0.066

**Brush Wellman Inc**

**Facility ID: 0362000009**

**PTI Application: 03-17418**

**Issued: To be entered upon final issuance**

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

**A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions**

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.

**B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(B006) - 12.8 mmBtu/hr Natural Gas-fired Boiler #1**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See A.I.2.a
OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average except as provided by rule
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 A.I.2.b)
OAC rule 3745-18-06	See A.I.2.c
OAC rule 3745-21-08(B)	See A.I.2.d
40 CFR Part 60 Subpart Dc	Record keeping (see A.III.2)

**2. Additional Terms and Conditions**

- 2.a The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to nitrogen oxide (NO<sub>x</sub>), carbon monoxide (CO), particulate matter 10 microns or less in size (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compound (VOC) emissions from this air contaminant source since the uncontrolled potential to emit for NO<sub>x</sub>, CO, PM<sub>10</sub>, SO<sub>2</sub> VOC are each less than ten tons per year.

The potential to emit for NO<sub>x</sub> emissions equals 5.50 tons/yr and was determined by dividing the maximum emission rate of 100 lbs NO<sub>x</sub>/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 PM<sub>10</sub> emissions equals 0.42 ton/yr and was determined

Emissions Unit ID: B006

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 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.

The potential to emit for SO<sub>2</sub> emissions equals 0.033 ton/yr and was determined by dividing the maximum emission rate of 0.6 lb SO<sub>2</sub>/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.

- 2.b** The potential to emit for particulate emissions from this emissions unit (see A.1.2.a) is less than the allowable emission limitation established pursuant to this rule.
- 2.c** The emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
- 2.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.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

## III. 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.

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2. The permittee shall collect and record the volume (mmft3) of natural gas combusted in this emissions unit each calendar month.

**IV. 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

**V. 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

Emissions Unit ID: B006

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.

**VI. Miscellaneous Requirements**

None

**Issued: To be entered upon final issuance**

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(B006) - 12.8 mmBtu/hr Natural Gas-fired Boiler #1**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Issued: To be entered upon final issuance

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(B007) - 12.8 mmBtu/hr Natural Gas-fired Boiler #2**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See A.I.2.a
OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average except as provided by rule
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 A.I.2.b)
OAC rule 3745-18-06	See A.I.2.c
OAC rule 3745-21-08(B)	See A.I.2.d
40 CFR Part 60 Subpart Dc	See A.III.2

**2. Additional Terms and Conditions**

- 2.a The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the nitrogen oxide (NO<sub>x</sub>), carbon monoxide (CO), particulate matter 10 microns or less in size (PM<sub>10</sub>), and sulfur dioxide (SO<sub>2</sub>) emissions from this air contaminant source since the uncontrolled potential to emit for NO<sub>x</sub>, CO, PM<sub>10</sub>, and SO<sub>2</sub> are each less than ten tons per year.

The potential to emit for NO<sub>x</sub> emissions equals 5.50 tons/yr and was determined by dividing the maximum emission rate of 100 lbs NO<sub>x</sub>/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

Emissions Unit ID: B007

(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 1.9 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 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.

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.

- 2.b** The potential to emit for particulate emissions from this emissions unit (see A.1.2.a) is less than the allowable emission limitation established pursuant to this rule.
- 2.c** The emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
- 2.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.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

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Emissions Unit ID: B007

**Issued: To be entered upon final issuance**

**III. 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.

**IV. 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

**V. Testing Requirements**

Emissions Unit ID: B007

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.

## **VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(B007) - 12.8 mmBtu/hr Natural Gas-fired Boiler #2**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (P113) - Decomposition Furnace No. 1**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	<p>Beryllium (Be) emissions shall not exceed 0.00051 lb/hr and 0.0022 ton/yr.</p> <p>Fluoride compound emissions shall not exceed 0.044 lb/hr and 0.19 ton/yr.</p> <p>Hydrogen cyanide (HCN) emissions shall not exceed 0.035 lb/hr and 0.15 ton/yr.</p> <p>Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.12 lb/hr and 0.53 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average.</p> <p>See A.I.2.a</p>
OAC rule 3745-17-11(B)	See A.I.2.b
OAC rule 3745-17-07(A)	See A.I.2.c
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS
40 CFR Part 63 Subpart GGGGGG	See A.I.2.d

**2. Additional Terms and Conditions**

- 2.a Permit to Install 03-17418 for this air contaminant source takes into account the

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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 electrostatic precipitator achieving the following control efficiencies and an associated 0% opacity, as a six-minute average.
  - (a) 80% control efficiency for Be;
  - (b) 80% control efficiency for Fluoride compounds;
  - (c) 95% control efficiency for HCN;
  - (d) 89% control efficiency for PM10\*

The potential to emit for this emissions unit for Be, Fluoride compounds, HCN, and PM10 is represented by the ton per year limitation established under OAC rule 3745-31-05(C). The ton per year emission limitations were established by multiplying the maximum uncontrolled emission rate for each specific pollutant from the process recovery scrubber by the respective pollutant control efficiency.

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

- 2.b** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C). 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.
- 2.c** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- 2.d** 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 A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS).

**Brush Wellman Inc**  
**DTI Application: 02 17410**

**Facility ID: 036200009**

Emissions Unit ID: P113

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

**II. Operational Restrictions**

None

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**III. 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, the combustion temperature within the thermal oxidizer 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.

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

**Brush Wellman Inc**

**DTI Application: 02 17410**

**Facility ID: 036200009**

Emissions Unit ID: P113

requirements of this permit and may be incorporated into this permit by means of an administrative modification.

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**IV. 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, that would bring the combustion temperature 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.

**V. 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 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 mass emission limitations of 0.00051 lb Be/hr, 0.044 lb Fluoride compounds/hr, 0.035 lb HCN/hr, 0.12 lb PM10/hr.

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- 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;

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- 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 and 201a 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 A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
- a. Emission Limitations:  
0.00051 lb Be/hr, 0.0022 ton/year  
0.044 lb Fluoride compounds/hr, 0.19 ton/year  
0.035 lb HCN/hr, 0.15 ton/year  
0.12 lb PM10/hr, 0.53 ton/yr
- Applicable Compliance Method:

Emissions Unit ID: P113

Compliance with the lb/hr emission limitations shall be demonstrated by emissions testing requirements in A.V.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.

- b. Emission Limitation:  
Visible PE shall not exceed 0% 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."

## VI. Miscellaneous Requirements

None

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**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P113) - Decomposition Furnace No. 1**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. 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

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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 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".

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P114) - Decomposition Furnace No. 2**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	<p>Beryllium (Be) emissions shall not exceed 0.00051 lb/hr and 0.0022 ton/yr.</p> <p>Fluoride compounds emissions shall not exceed 0.044 lb/hr and 0.19 ton/yr.</p> <p>Hydrogen cyanide (HCN) emissions shall not exceed 0.035 lb/hr and 0.15 ton/yr.</p> <p>Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.12 lb/hr and 0.53 ton/yr</p> <p>Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average.</p> <p>See A.I.2.a</p>
OAC rule 3745-17-11(B)	See A.I.2.b
OAC rule 3745-17-07(A)	See A.I.2.c
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS
40 CFR Part 63 Subpart GGGGGG	See A.I.2.d

**2. Additional Terms and Conditions**

- 2.a Permit to Install 03-17418 for this air contaminant source takes into account the

Emissions Unit ID: P114

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 electrostatic precipitator achieving the following control efficiencies and an associated 0% opacity, as a six-minute average.
  - (a) 80% control efficiency for Be;
  - (b) 80% control efficiency for Fluoride compounds;
  - (c) 95% control efficiency for HCN;
  - (d) 89% control efficiency for PM10\*

The potential to emit for this emissions unit for Be, Fluoride compounds, HCN, and PM10 is represented by the ton per year limitation established under OAC rule 3745-31-05(C). The ton per year emission limitations were established by multiplying the maximum uncontrolled emission rate for each specific pollutant from the process recovery scrubber by the respective pollutant control efficiency.

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

- 2.b** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C). 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.
- 2.c** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- 2.d** 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 A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS).

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

## II. Operational Restrictions

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None

Emissions Unit ID: P114

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**III. 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, the combustion temperature within the thermal oxidizer 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.

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

**Brush Wellman Inc**  
**DTI Application: 03 17410**

**Facility ID: 036200009**

Emissions Unit ID: P114

requirements of this permit and may be incorporated into this permit by means of an administrative modification.

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**IV. 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, that would bring the combustion temperature 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.

**V. 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 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 mass emission limitations of 0.00051 lb Be/hr, 0.044 lb Fluoride compounds/hr, 0.035 lb HCN/hr, 0.12 lb PM10/hr.

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- 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 and 201a 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 A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
- a. Emission Limitations:  
0.00051 lb Be/hr, 0.0022 ton/year

**Brush Wellman Inc****DTI Application: 03 17118****Facility ID: 036200009**

Emissions Unit ID: P114

0.044 lb Fluoride compounds/hr, 0.19 ton/year

0.035 lb HCN/hr, 0.15 ton/year

0.12 lb PM10/hr, 0.53 ton/yr

Applicable Compliance Method:

Compliance with the lb/hr emission limitations shall be demonstrated by emissions testing requirements in A.V.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.

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b. Emission Limitation:

Visible PE shall not exceed 0% 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."

**VI. Miscellaneous Requirements**

None

**Issued: To be entered upon final issuance**

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P114) - Decomposition Furnace No. 2**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. 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

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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 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".

Issued: To be entered upon final issuance

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P115) - Decomposition Furnace No. 3**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	<p>Beryllium (Be) emissions shall not exceed 0.00051 lb/hr and 0.0022 ton/yr.</p> <p>Fluoride compounds emissions shall not exceed 0.044 lb/hr and 0.19 ton/yr.</p> <p>Hydrogen cyanide (HCN) emissions shall not exceed 0.035 lb/hr and 0.15 ton/yr.</p> <p>Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.12 lb/hr and 0.53 ton/yr</p> <p>Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average.</p> <p>See A.I.2.a</p>
OAC rule 3745-17-11(B)	See A.I.2.b
OAC rule 3745-17-07(A)	See A.I.2.c
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS
40 CFR Part 63 Subpart GGGGGG	See A.I.2.d

**2. Additional Terms and Conditions**

- 2.a Permit to Install 03-17418 for this air contaminant source takes into account the

Emissions Unit ID: P115

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 electrostatic precipitator achieving the following control efficiencies and an associated 0% opacity, as a six-minute average.
  - (a) 80% control efficiency for Be;
  - (b) 80% control efficiency for Fluoride compounds;
  - (c) 95% control efficiency for HCN;
  - (d) 89% control efficiency for PM10\*

The potential to emit for this emissions unit for Be, Fluoride compounds, HCN, and PM10 is represented by the ton per year limitation established under OAC rule 3745-31-05(C). The ton per year emission limitations were established by multiplying the maximum uncontrolled emission rate for each specific pollutant from the process recovery scrubber by the respective pollutant control efficiency.

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

- 2.b** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C). 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.
- 2.c** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- 2.d** 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 A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS).

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

## II. Operational Restrictions

**Issued: To be entered upon final issuance**  
None

Emissions Unit ID: P115

**Issued: To be entered upon final issuance**

**III. 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, the combustion temperature within the thermal oxidizer 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.

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

**Brush Wellman Inc**  
**DTI Application: 03 17410**

**Facility ID: 036200009**

Emissions Unit ID: P115

requirements of this permit and may be incorporated into this permit by means of an administrative modification.

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**IV. 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, that would bring the combustion temperature 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.

**V. 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 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 mass emission limitations of 0.00051 lb Be/hr, 0.044 lb Fluoride compounds/hr, 0.035 lb HCN/hr, 0.12 lb PM10/hr.

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- 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 and 201a 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 A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
- a. Emission Limitations:  
0.00051 lb Be/hr, 0.0022 ton/year

**Brush Wellman Inc****DTI Application: 02 17410****Facility ID: 0362000009**

Emissions Unit ID: P115

0.044 lb Fluoride compounds/hr, 0.19 ton/year

0.035 lb HCN/hr, 0.15 ton/year

0.12 lb PM10/hr, 0.53 ton/yr

Applicable Compliance Method:

Compliance with the lb/hr emission limitations shall be demonstrated by emissions testing requirements in A.V.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.

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b. Emission Limitation:

Visible PE shall not exceed 0% 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."

**VI. Miscellaneous Requirements**

None

**Issued: To be entered upon final issuance**

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P115) - Decomposition Furnace No. 3**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. 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

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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 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".

Issued: To be entered upon final issuance

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (P116) - Reduction Furnace No. 1**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	<p>Combined emissions from P116 and P117 for Beryllium (Be) shall not exceed 0.0069 lb/hr and 0.03 ton/yr.</p> <p>Combined emissions from P116 and P117 for Fluoride compounds shall not exceed 0.0066 lb/hr and 0.029 ton/yr.</p> <p>Combined emissions from P116 and P117 for Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.054 lb/hr and 0.24 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average.</p> <p>See A.I.2.a</p>
OAC rule 3745-17-11(B)	See A.I.2.b
OAC rule 3745-17-07(A)	See A.I.2.c
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS
40 CFR Part 63 Subpart GGGGGG	See A.I.2.d

**2. Additional Terms and Conditions**

- 2.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

Emissions Unit ID: P116

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

- i. use of a wet electrostatic precipitator achieving the following control efficiencies and an associated 0% 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\*

The potential to emit for this emissions unit for Be, Fluoride compounds, and PM10 is represented by the ton per year limitation established under OAC rule 3745-31-05(C). The ton per year emission limitations were established by multiplying the maximum uncontrolled emission rate for each specific pollutant from the process recovery scrubber by the respective pollutant control efficiency.

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

- 2.b** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C). 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.
- 2.c** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- 2.d** 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 A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS).

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

## II. Operational Restrictions

None

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**III. 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, the combustion temperature within the thermal oxidizer 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.

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

Emissions Unit ID: P116

requirements of this permit and may be incorporated into this permit by means of an administrative modification.

#### **IV. 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, that would bring the combustion temperature 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.

#### **V. 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 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.
  - a. The emissions testing shall be conducted within 180 days after initial startup of the reduction furnaces. Both reduction furnaces must be operating along with the following emission units during the test: three decomposition furnaces (P113 - P115), 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:

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- i. the combined mass emission limitations from P116 and P117 of 0.0069 lb Be/hr, 0.0066 lb Fluoride compounds/hr, 0.054 lb PM10/hr.
- 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 Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
  - iv. for PM10 - Method 201 and 201a 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 A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

Emissions Unit ID: P116

- a. Emission Limitations: Combined for emission units P116 and P117  
0.0069 lb Be/hr, 0.03 ton/year  
0.0066 lb Fluoride compounds/hr, 0.029 ton/year  
0.054 lb PM10/hr, 0.24 ton/yr

Applicable Compliance Method:

Compliance with the lb/hr emissions limitations shall be demonstrated by emissions testing requirements in A.V.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.

- b. Emission Limitation:  
Visible PE shall not exceed 0% 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."

**VI. Miscellaneous Requirements**

None

**Issued: To be entered upon final issuance**

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P116) - Reduction Furnace No. 1**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Issued: To be entered upon final issuance

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P117) - Reduction Furnace No. 2**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	<p>Combined emissions from P116 and P117 for Beryllium (Be) shall not exceed 0.0069 lb/hr and 0.03 ton/yr.</p> <p>Combined emissions from P116 and P117 for Fluoride compounds shall not exceed 0.0066 lb/hr and 0.029 ton/yr.</p> <p>Combined emissions from P116 and P117 for Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.054 lb/hr and 0.24 ton per year (TPY).</p> <p>Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average.</p> <p>See A.I.2.a</p>
OAC rule 3745-17-11(B)	See A.I.2.b
OAC rule 3745-17-07(A)	See A.I.2.c
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS
40 CFR Part 63 Subpart GGGGGG	See A.I.2.d

**2. Additional Terms and Conditions**

- 2.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

Emissions Unit ID: P117

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

- i. use of a wet electrostatic precipitator achieving the following control efficiencies and an associated 0% 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\*

The potential to emit for this emissions unit for Be, Fluoride compounds, and PM10 is represented by the ton per year limitation established under OAC rule 3745-31-05(C). The ton per year emission limitations were established by multiplying the maximum uncontrolled emission rate for each specific pollutant from the process recovery scrubber by the respective pollutant control efficiency.

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

- 2.b** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C). 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.
- 2.c** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- 2.d** 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 A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS).

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

## II. Operational Restrictions

None

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**III. 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, the combustion temperature within the thermal oxidizer 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.

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

Emissions Unit ID: P117

requirements of this permit and may be incorporated into this permit by means of an administrative modification.

#### IV. 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, that would bring the combustion temperature 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.

#### V. 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 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.
  - a. The emissions testing shall be conducted within 180 days after initial startup of the reduction furnaces. Both reduction furnaces must be operating along with the following emission units during the test: three decomposition furnaces (P113 - P115), 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:

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- i. the combined mass emission limitations from P116 and P117 of 0.0069 lb Be/hr, 0.0066 lb Fluoride compounds/hr, 0.054 lb PM10/hr.
- 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 Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;

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- iv. for PM10 - Method 201 and 201a 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 A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations: Combined for emission units P116 and P117  
0.0069 lb Be/hr, 0.03 ton/year  
0.0066 lb Fluoride compounds/hr, 0.029 ton/year  
0.054 lb PM10/hr, 0.24 ton/yr

Applicable Compliance Method:

Compliance with the lb/hr emissions limitations shall be demonstrated by emissions testing requirements in A.V.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.

**Brush Wellman Inc**  
**DTI Application: 03 17410**

**Facility ID: 036200009**

Emissions Unit ID: P117

- b. Emission Limitation:  
Visible PE shall not exceed 0% opacity, as a six-minute average from the stack serving this emissions unit.

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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."

**VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (P117) - Reduction Furnace No. 2**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P118) - Wet Plant - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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OAC rule 3745-31-05(C)	<p>Wet Plant Concentrated Fluoride Operations:</p> <p>Beryllium (Be) emissions shall not exceed 0.00000097 lb/hr and 0.0000042 ton/yr.</p> <p>Fluoride compound emissions shall not exceed 0.0014 lb/hr and 0.0061 ton/yr.</p> <p>Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.012 lb/hr and 0.053 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average from the ESP stack serving this operation</p> <p>See A.I.2.a.</p> <p>Wet Plant Raw Material Handling:</p> <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 0% opacity, as a six-minute average from the baghouse stack serving this operation</p> <p>See A.I.2.b.</p>
OAC rule 3745-31-05(A)(3)(b)	Wet Plant Miscellaneous Operations: See A.I.2.c.
OAC rule 3745-17-11(B)	See A.I.2.d
OAC rule 3745-17-07(A)	See A.I.2.e
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

**2. Additional Terms and Conditions**

- 2.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).

Emissions Unit ID: P118

- i. for concentrated fluoride operations - use of a wet electrostatic precipitator with a control efficiency of 80 % for Be, Fluoride compounds, PM10 and an associated 0% opacity, as a six-minute average

The potential to emit for concentrated fluoride operations for Be, Fluoride compounds, and PM10\* is represented by the ton per year limitation established under OAC rule 3745-31-05(C). The ton per year emission limitations were established by multiplying the maximum uncontrolled emission rate for each specific pollutant from the process recovery scrubber by the respective pollutant control efficiency.

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

- 2.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. for raw material handling operations - use of a baghouse achieving a maximum outlet concentration of 0.0003 grains/dscf of PM10 and an associated 0% opacity, as a six-minute average.

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.

All emissions of particulate matter are PM10.

- 2.c** 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.

- 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C). This determination

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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.

- 2.e The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

**II. Operational Restrictions**

None

**III. 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 concentrated fluoride operations. 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 within 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,

Emissions Unit ID: P118

the total period of time (in minutes) during which there was a deviation, the combustion temperature within the thermal oxidizer 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.

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 perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack(s) serving the Wet Plant Raw Material Handling Operations. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.

#### **IV. Reporting Requirements**

1. The permittee shall submit semiannual written reports that identify (a) all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA district office or local field office by January 31 and July 31 of each year and shall cover the previous 6-month period.
2. The permittee shall submit quarterly reports that identify the following information concerning the operation of the ESP during the operation of the concentrated fluoride operations:
  - 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;

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- 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 combustion temperature 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.

**V. Testing Requirements**

- 1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. Emissions testing shall be conducted on the ESP serving the concentrated fluoride operations within 180 days after initial startup of the emissions units. The Wet Plant Concentrated Fluoride Operations must be operating along with the following emission units during the test: three decomposition furnaces (P113 - P115), and both reduction furnaces (P116 and P117). All of these emission units are controlled by the same wet electrostatic precipitator.
  - b. The emission testing on the ESP shall be conducted to demonstrate compliance with the following limits:
    - i. 0.00000097 lb Be/hr
    - ii. 0.0014 lb Fluoride Compounds/hr
    - iii. 0.012 lb PM10/hr.
  - c. The following test methods shall be employed to demonstrate compliance with the above emission limitations:
    - 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;

Emissions Unit ID: P118

- iii. for Fluoride compounds - Method 13 of 40 CFR Part 60, Appendix A;
- iv. for PM10 - Method 201 and 201a 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 A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations: for Wet Plant Concentrated Fluoride Operations  
0.00000097 lb Be/hr, 0.0000043 ton/yr  
0.0014 lb F/hr, 0.0061 ton/yr  
0.012 lb PM10/hr, 0.053 ton/yr

Applicable Compliance Method:

Compliance with the lb/hr emissions limitations shall be demonstrated by emissions testing requirements in A.V.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.

- b. Emission Limitation:  
Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute

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average from the ESP stack serving this operation

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.

- d. Emission Limitation:  
Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average from the baghouse stack serving this operation

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."

**VI. Miscellaneous Requirements**

None

Emissions Unit ID: P118

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P118) - Wet Plant - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P119) - Material Handling System - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See A.I.2.a.
OAC rule 3745-17-11(B)	None, See A.I.2.b.
OAC rule 3745-17-07(A)	None, See A.I.2.c.
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

**2. Additional Terms and Conditions**

- 2.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 0.0018 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.

- 2.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).

Emissions Unit ID: P119

- 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.

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Emissions Unit ID: P119

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (P119) - Material Handling System - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (P120) - Furnace Rebuild Operation - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	<p>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.</p> <p>Beryllium (Be) emissions shall not exceed 0.00051 lb/hr and 0.0022 ton/yr.</p> <p>Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average.</p> <p>See A.I.2.a</p>
OAC rule 3745-17-11(B)	See A.I.2.b
OAC rule 3745-17-07(A)	See A.I.2.c
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

**2. Additional Terms and Conditions**

- 2.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 0% opacity, as a six-minute average.

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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.

- 2.b** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C). 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.
- 2.c** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the

**Brush Wellman Inc****DTI Application: 02 17410****Facility ID: 036200009**

Emissions Unit ID: P120

operations log:

- a. the color of the emissions;
- b. the total duration of any visible emission incident; and
- c. any corrective actions taken to eliminate the visible emissions.

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**IV. Reporting Requirements**

1. The permittee shall submit semiannual written reports that identify (a) all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA district office or local field office by January 31 and July 31 of each year and shall cover the previous 6-month period.

**V. 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 and 201a 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

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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 A.I.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 A.V.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

**Brush Wellman Inc****DTI Application: 02 17410****Facility ID: 0362000009**

Emissions Unit ID: P120

annual limitation shall be assumed.

c. Emission Limitation:

Visible PE shall not exceed 0% 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."

Emissions Unit ID: P120

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**VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P120) - Furnace Rebuild Operation - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (P121) - Lab Hoods - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See A.I.2.a.
OAC rule 3745-17-11(B)	None, See A.I.2.b.
OAC rule 3745-17-07(A)	None, See A.I.2.c.
40 CFR 61.32(b)	See Section A. of Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

**2. Additional Terms and Conditions**

- 2.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 test data.

The potential to emit for Be is 0.00048 ton/yr and is based on test data and is being presented for informational purposes.

All particulate matter emissions are PM10 and include Be.

- 2.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).
- 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

Emissions Unit ID: P121

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3745-17-11 is not applicable.

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**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Emissions Unit ID: P121

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(P121) - Lab Hoods - Pebble Plant**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None