Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

4/3/2012

Certified Mail

Yes	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
Yes	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED

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

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0362000009
Permit Number: P0109698
Permit Type: Administrative Modification
County: Ottawa

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of 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 permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Port Clinton News Herald. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page,www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now.If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA Region 5 -*Via E-Mail Notification*
Ohio EPA-NWDO; Michigan; Canada

Permit Strategy Write-Up

1. Check all that apply:

   X Synthetic Minor Determination

   Netting Determination

2. Source Description: MaterionBrush has requested a Chapter 31 modification to the Permit to Install (PTI #P0106917) for a group of emissions units associated with the new pebble plant, located at their beryllium/beryllium alloy production facility in Elmore, Ohio (Ottawa County). These are emissions units P114 (decomposition furnace no. 2), P115 (decomposition furnace no. 3), P116 (reduction furnace no. 1), P117 (reduction furnace no. 2), P118 (wet plant), and P122 (decomposition furnace no. 1). All are controlled by a wet electrostatic precipitator (ESP), and have group emissions limitations.

3. Facility Emissions and Attainment Status: MaterionBrush is a major facility for Prevention of Significant Deterioration (PSD) and Title V purposes. MaterionBrush is an area source with respect to hazardous air pollutant (HAP) emissions, including beryllium, and complies with the beryllium NESHAP [40 CFR 61.32(b)]. Ottawa County is in attainment for all criteria pollutants.

4. Source Emissions: MaterionBrushis requesting a Chapter 31 modification to PTI P0106917 to increase the emissions limits for Fluoride (Fl) and Hydrogen Cyanide (HCN). The synthetic minor to establish federally enforceable limitations for particulate matter equal to or less than 10 microns in size (PM10) to avoid PSD permitting requirements will remain the same. The federally enforceable limitation is based on an operational restriction to use a wet ESP capable of achieving a control efficiency of 80% for PM10, fluoride compounds, and Be, and 95% for hydrogen cyanide (HCN). The federally enforceable restriction which limits PM10 emissions also limits HCN, fluoride and Be emissions.

5. Conclusion: The new emissions limits for HCN and Fl will reflect actual emissions measured during emissions testing conducted in February 2012. Also, with the federally enforceable limitations established previously for PM10 emissions from the five furnaces and wet plant, the company will not trigger the significance levels for PSD permitting.

6. Please provide additional notes or comments as necessary: None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

Pollutant	Tons Per Year
PM10	1.87
Be	0.0368
Fluoride compounds	2.2
HCN	4.38

PUBLIC NOTICE
4/3/2012 Issuance of Draft Air Pollution Permit-To-Install

Materion Brush Inc.
14710 W. Portage River South Road, 1/4 mile east of SR 590
Harris, OH 43416-9502
Ottawa County
FACILITY DESC.: Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)
PERMIT #: P0109698
PERMIT TYPE: Administrative Modification
PERMIT DESC: Administrative modification is being requested by the permittee based emissions testing done of February 7, and February 9, 2012. Permittee is requesting to change the combined limits for HCN from 0.1 lb/hr and 0.44 ton/yr, to 1.0 lbs/hr and 4.38 tons/yr; and the combined limit for Fluoride compounds from 0.138 lb/hr and 0.605 ton/yr, to 0.5 lb/hr and 2.2 tons/yr.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the permit # or: Andrea Moore, Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402. Ph: (419)352-8461

Ohio | Environmental Protection Agency

DRAFT

Division of Air Pollution Control
Permit-to-Install
for
Materion Brush Inc.

Facility ID:	0362000009
Permit Number:	P0109698
Permit Type:	Administrative Modification
Issued:	4/3/2012
Effective:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install
for
Materion Brush Inc.

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Authorization

Facility ID:	0362000009
Facility Description:	Copper Rolling and Drawing
Application Number(s):	M0001590
Permit Number:	P0109698
Permit Description:	Administrative modification is being requested by the permittee based emissions testing done of February 7, and February 9, 2012. Permittee is requesting to change the combined limits for HCN from 0.1 lb/hr and 0.44 ton/yr, to 1.0 lbs/hr and 4.38 tons/yr; and the combined limit for Fluoride compounds from 0.138 lb/hr and 0.605 ton/yr, to 0.5 lb/hr and 2.2 tons/yr.
Permit Type:	Administrative Modification
Permit Fee:	$600.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date:	4/3/2012
Effective Date:	To be entered upon final issuance

This document constitutes issuance to:

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

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

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

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0109698
Permit Description: Administrative modification is being requested by the permittee based emissions testing done of February 7, and February 9, 2012. Permittee is requesting to change the combined limits for HCN from 0.1 lb/hr and 0.44 ton/yr, to 1.0 lbs/hr and 4.38 tons/yr; and the combined limit for Fluoride compounds from 0.138 lb/hr and 0.605 ton/yr, to 0.5 lb/hr and 2.2 tons/yr.

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

Group Name: Pebble Plant- 5 furnaces&wet plt

Emissions Unit ID:	**P114**
Company Equipment ID:	Decomp. FCE No. 2
Superseded Permit Number:	P0106917
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P115**
Company Equipment ID:	Decomp. FCE No. 3
Superseded Permit Number:	P0106917
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P116**
Company Equipment ID:	Redcution FCE No.1
Superseded Permit Number:	P0106917
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P117**
Company Equipment ID:	Reduction FCE No. 2
Superseded Permit Number:	P0106917
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P118**
Company Equipment ID:	Wet Plant
Superseded Permit Number:	P0106917
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P122**
Company Equipment ID:	Decomp. FCE No. 1
Superseded Permit Number:	P0106917
General Permit Category andType:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

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

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

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

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

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

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

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

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

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

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

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have

been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in Ohio EPA’s “Air Services” along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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

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

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

16. Fees

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

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the “Owner/Contact Change” functionality in Air Services once the transfer is legally completed.The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. The ambient concentration of Be in the vicinity of the facility shall not exceed 0.01 micrograms (ug)/cubic meter, averaged over a 30-day period, as specified in the National Emissions Standard for Hazardous Air Pollutants, 40 CFR 61.32 (b). The permittee shall properly operate and maintain control equipment and implement control measures for all Be emitting emissions units at the facility.

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -Pebble Plant- 5 furnaces&wetplt: P114,P115,P116,P117,P118,P122,

EU ID	Operations, Property and/or Equipment Description
P114	Decomposition Furnace No. 2
P115	Decomposition Furnace No. 3
P116	Reduction Furnace No. 1
P117	Reduction Furnace No. 2
P118	Wet Plant - Pebble Plant
P122	Decomposition Furnace No. 1

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

(1) d)(6) through d)(9) and e)(2).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	<u>The following limitations apply to emission units P114, P115, P116, P117, P118, and P122 combined [See b)(2)a.]:</u> Combined emissions of Beryllium (Be) shall not exceed 0.0084 lb/hr and 0.0368 ton/yr. Combined emissions of Fluoride compounds shall not exceed 0.5 lb/hr and 2.2 tons/yr. Combined emissions of HCN shall not exceed 1.0 lb/hr and 4.38 tons/yr. Combined emissions of PM10 shall not exceed 0.426 lb/hr and 1.87 ton/yr. Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a., b)(2)b. and c)(1)
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c.
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)d.
d.	OAC rule 3745-17-11(B)	See b)(2)e.
e.	OAC rule 3745-17-07(A)	See b)(2)f.
f.	40 CFR 61.32(b)	See term2. of sectionB - FACILITY SPECIFIC TERMS AND CONDI
g.	40 CFR Part 63 Subpart GGGGGG	See b)(2)g. and b)(2)h.

(2) Additional Terms and Conditions

a. The combined emission limitations include emissions from the three decomposition furnaces (P114, P115, and P122), two reduction furnaces (P116 and P117), and the concentrated fluoride operations of P118. These sources are all controlled by the same wet electrostatic precipitator (ESP). It should be noted that HCN is only emitted from emission units P114, P115, and P122.

b. This permit establishes the following federally enforceable emission limitations for emissions units P114, P115, P116, P117, P118, and P122, combined, for the purpose of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) requirements. The federally enforceable emission limitations are based on the operational restriction contained in c)(1) which require control equipment:

i. 0.426 lb PM10/hr and 1.87 ton PM10/yr;

ii. 0.0084 lb Be/hr and 0.0368 ton Be/yr;

iii. 0.5 lb Fluoride compounds/hr and 2.2 tons Fluoride compounds/yr;

iv. 1.0 lb HCN/hr and 4.38 tons HCN/yr; and

v. Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average from the wet electrostatic precipitator serving this emissions unit.

All emissions of particulate matter from the wet ESP are PM10 and include Be and Fluoride compounds.

c. The requirements of this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(D); therefore, the permitteehas satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit.

On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 Changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, the requirements of 3745-31-05(A)(3) as effective 12-1-06 will no longer apply.

It should be noted that the emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) will remain applicable after the above SIP revisions are approved by U.S. EPA.

d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a), as effective December 1, 2006, do not apply to the PM_{10} emissions from this air contaminant source since the controlled potential to emit (PTE) is less than 10 tons per year taking into consideration federally enforceable requirements established under OAC rule 3745-31-05(D).

i. The combined potential to emit for Be, Fluoride compounds, and PM10 from emission units P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118 is represented by the combined ton per year limitation established under OAC rule 3745-31-05(D). The combined ton per year emission limitations were established using the following maximum uncontrolled emission rates (from process recovery scrubbers) and the respective pollutant control efficiency:

(a) For each individual decomposition furnace (P114, P115, and P122):

(i) Be - 0.00255 lb/hr, 0.011 ton/yr;

(ii) Fluoride compounds – 0.0088 lb/hr, 0.0385 ton/yr; and

(iii) PM10 – 0.6 lb/hr, 2.63 tons/yr.

(b) For reduction furnaces P116 and P117 combined:

(i) Be – 0.0345 lb/hr, 0.15 ton/yr;

(ii) Fluoride compounds – 0.033 lb/hr, 0.14 ton/yr; and

(iii) PM10 – 0.27 lb/hr, 1.18 tons/yr.

(c) For the concentrated fluoride operations of P118:

(i) Be – 0.000008 lb/hr, 0.000035 ton/yr;

(ii) Fluoride compounds – 0.007 lb/hr, 0.031 ton/yr; and

(iii) PM10 – 0.06 lb/hr, 0.263 ton/yr.

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

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

g. In accordance with 40 CFR 63.11165 the standards and compliance requirements for Primary Beryllium Production Facilities is compliance with the requirements of 40 CFR 61.32 through 40 CFR 61.34 of the National Emission Standards for Beryllium (See term 2 of section B - FACILITY-WIDE TERMS AND CONDITIONS).

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

c) Operational Restrictions

(1) The following operational restriction has been included in this permit for the purpose of establishing federally enforceable requirements which limit PTE [see b)(2)a.]:

a. use of a wet ESP to control emissions from P114, P115, P116, P117, P122, and the concentrated fluoride operations of P118.

b. the wet ESP shall achieve the following control efficiencies and an associated 5% opacity, as a six-minute average:

i. 80% control efficiency for Be;

ii. 80% control efficiency for fluoride compounds

iii. 95% control efficiency for HCN; and

iv. 80% control efficiency for PM10**

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

d) Monitoring and/or Recordkeeping Requirements

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

(2) 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.

(3) In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

(4) 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.

(5) 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.

(6) The permit-to-install (PTI) application for emissions units P114 through P118, and P122, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at

over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

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

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

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

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

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

   TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

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

   Toxic Contaminant: Hydrogen Cyanide

   TLV (mg/m3): 3.83

   Maximum Hourly Emission Rate (lbs/hr): 1.0

   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.279

   MAGLC (ug/m3): 91.0

The permittee, has demonstrated that emissions of hydrogen cyanide, from emissions units P114 through P118, and P122, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

e. Toxic Contaminant: Hydrogen Fluoride

TLV (mg/m3): 0.41

Maximum Hourly Emission Rate (lbs/hr): 0.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.14

MAGLC (ug/m3): 9.76

The permittee, has demonstrated that emissions of hydrogen fluoride, from emissions units P114 through P118, and P122, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

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

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

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

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the

emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

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

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

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

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

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

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

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. for each field of the ESP, each period of time when the field was not operating within the acceptable ranges for voltage and current;

b. an identification of each incident of deviation described in e)(1)a. where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in e)(1)a. where prompt corrective action was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in e)(1)a. where proper records were not maintained for the investigation and/or the corrective action.

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

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

f) Testing Requirements

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

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

0.0084 lbBe/hr, 0.0368 ton/yr
0.5 lb Fluoride compounds/hr, 2.2 tons/yr
1.0 lb HCN/hr, 4.38 tons/yr
0.426 lb PM10/hr, 1.87 ton/yr

Applicable Compliance Method:
Compliance with the combined lb/hr emission limitations was demonstrated by emissions testing,which was completed on February 7, and 9, 2012. If required, the permittee shall demonstrate compliance with the lb/hr emission limitations by testing in accordance with Methods 1 - 4 of 40 CFR Part 60, Appendix A and the following: Method 29 or 104 of 40 CFR Part 60, Appendix A for Be; Method 13 of 40 CFR Part 60, Appendix A for Fluoride; Other Test Method 29 for HCN; and Method 201/201A and 202 of 40 CFR Part 51, Appendix M for PM10. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

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

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

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

g) Miscellaneous Requirements

(1) None.