



State of Ohio Environmental Protection Agency

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OHIO E.P.A.
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STREET ADDRESS:

1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

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

Re: Permit to Install
Ottawa County
Application No: 03-0823
NESHAP
TOXIC REVIEW

CERTIFIED MAIL

P082-P087

February 11, 1998

BRUSH WELLMAN INC
LARRY CHAKO
14710 W PORTAGE RIVER RD SOUTH
ELMORE, OH 43416

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions I urge you to read it carefully.

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.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager
Field Operations & Permit Section
Division of Air Pollution Control

cc: US EPA
NORTHWEST DISTRICT OFFICE, DAPC
TOLEDO METROPOLITAN COUNCIL OF GOVT.

George V. Voinovich, Governor
Nancy P. Hollister, Lt. Governor
Donald R. Schregardus, Director



Permit to Install Terms and Conditions

Application No. 03-0823
APS Premise No. 0362000009
Permit Fee: \$2400.00

Name of Facility: BRUSH WELLMAN INC

Person to Contact: LARRY CHAKO

Address: 14710 W PORTAGE RIVER RD SOUTH
ELMORE, OH 43416

Location of proposed source(s): 14710 W PORTAGE RIVER ROAD SOUTH
ELMORE, OHIO

Description of proposed source(s):
2 MELTING FURNACES, 2 TUNDISH PREHEATERS, 2 CAST SHOP VACUUM
SYSTEMS.

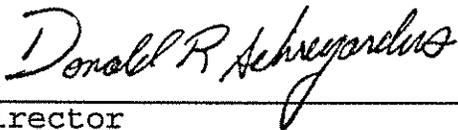
Date of Issuance: February 11, 1998

Effective Date: February 11, 1998

The above named entity is hereby granted a permit to install for the above described source(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 source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described source(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



Director

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights

that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

AIR EMISSION SUMMARY

The air contaminant sources listed below comprise the Permit to Install for BRUSH WELLMAN INC located in Ottawa County. The sources listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
P082	30 ton electric induction melting/holding furnace (furnace 7)	Compliance with the terms and conditions of this permit-use of baghouse and high efficiency filter in series	3745-31-05 3745-17-11 (B) (1) 3745-17-07 (A) (1-3) 40 CFR 61 Subpart C	0.028 lb/hr PM 0.12 ton/yr PM 0.0048 lb/hr Be 0.02 ton/yr Be 20% opacity, except as provided by rule 0.01 ug/cu m (a facility-wide ambient monitor requirement)
P083	30 ton electric induction melting/holding furnace (furnace 8)	Compliance with the terms and conditions of this permit-use of baghouse and high efficiency filter in series	3745-31-05 3745-17-11 (B) (1) 3745-17-07 (A) (1-3) 40 CFR 61 Subpart C	0.028 lb/hr PM 0.12 ton/yr PM 0.0048 lb/hr Be 0.02 ton/yr Be 20% opacity, except as provided by rule 0.01 ug/cu m (a facility-wide ambient monitor requirement)
P084	Tundish Preheater 1 (0.5 mmBtu/hr) (n.g.-direct-fired)	Compliance with the terms and conditions of this permit	3745-31-05 3745-17-11 (B) (1) 3745-17-07 (A) (1-3)	0.050 lb/hr NO _x 0.219 ton/hr NO _x 0.006 lb/hr PM 0.026 ton/yr PM 20% opacity, except as provided by rule
P085	Tundish Preheater 2 (0.5 mmBtu/hr) (n.g.-direct-fired)	Compliance with the terms and conditions of this permit	3745-31-05 3745-17-11 (B) (1) 3745-17-07 (A) (1-3)	0.050 lb/hr NO _x 0.219 ton/hr NO _x 0.006 lb/hr PM 0.026 ton/yr PM 20% opacity,

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
		permit.		except as provided by rule
P086	Cast shop vacuum system 1	Compliance with the terms and conditions of this permit-use of primary and secondary filter particulate control in series	3745-31-05 3745-17-11 (B) (1) 3745-17-07 (A) (1-3) 40 CFR 61 Subpart C	0.000046 lb/hr PM 0.0002 ton/yr PM 0.0000079 lb/hr Be 0.000035 ton/yr Be 20% opacity, except as provided by rule 0.01 ug/cu m (a facility-wide ambient monitor equipment)
P087	Finishing area vacuum system 2	Compliance with the terms and conditions of this permit-use of primary and secondary filter particulate control in series	3745-31-05 3745-17-11 (B) (1) 3745-17-07 (A) (1-3) 40 CFR 61 Subpart C	0.000051 lb/hr PM 0.00022 ton/yr PM 0.0000087 lb/hr Be 0.000038 ton/yr Be 20% opacity, except as provided by rule 0.01 ug/cu m (a facility-wide ambient monitor equipment)

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
PM	0.293*
Be	0.042
NO _x	0.438
CO	0.096
OC	0.036

*includes emissions of Be

NESHAP REQUIREMENTS

The following source(s) are subject to the applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as promulgated by the United States Environmental Protection Agency under 40 CFR Part 61.

<u>Source No.</u>	<u>Source Description</u>	<u>NESHAP Regulation</u>
P082	30 Ton Electric Induction Melting/Holding Furnace	40 CFR 61.32 (b)
P083	30 Ton Electric Induction Melting/Holding Furnace	40 CFR 61.32 (b)
P084	Tundish Preheater 1	40 CFR 61.32 (b)
P085	Tundish Preheater 2	40 CFR 61.32 (b)
P086	Cast Shop Vacuum System 1	40 CFR 61.32 (b)
P087	Finishing Area Vacuum System 2	40 CFR 61.32 (b)

The application and enforcement of these standards are delegated to Ohio EPA. The requirements of 40 CFR Part 61 are also federally enforceable.

Pursuant to the NESHAP, the source owner/operator is required to report the following milestones:

- a. date of commencement of construction (no later than 30 days after such date);
- b. anticipated date of initial start-up (not more than 60 days or less than 30 days prior to such date);
- c. actual date of initial start-up (within 15 days after such date); and
- d. date of performance testing (at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
Division of Air Pollution Control
Permit Management Unit
P.O. Box 1049
Columbus, OH 43216-1049

and OEPA Northwest District Office - DAPC
347 North Dunbridge Road
Bowling Green, Ohio 43402

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RECORD(S) RETENTION AND AVAILABILITY

All records required by this Permit to Install shall be retained on file for a period of not less than three years unless otherwise indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business hours.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to OEPA Northwest District Office - DAPC, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the OEPA Northwest District Office - DAPC, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

CONSTRUCTION COMPLIANCE CERTIFICATION

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

Introduction

This Permit to Install (PTI) is to make updates to a previous PTI (03-9105) issued August 7, 1996. The previous PTI was for an expansion of the beryllium copper strip plant. Equipment changes will be as follows:

Equipment dropped from previous PTI:

<u>Emissions Unit Number</u>	<u>Emissions Unit Identification</u>
P071	10 ton Electric Induction Melting Furnace #7
P072	10 ton Electric Induction Melting Furnace #8
P073	10 ton Electric Induction Melting Furnace #9
P074	30 ton Electric Induction Holding Furnace

Equipment added with this PTI:

<u>Emissions Unit Number</u>	<u>Emissions Unit Identification</u>
P082	30 ton Electric Induction Melting/Holding Furnace #7
P083	30 ton Electric Induction Melting/Holding Furnace #8
P084	Tundish Preheater 1
P085	Tundish Preheater 2
P086	Cast Shop Vacuum System 1
P087	Finishing Area Vacuum System 2

A. Applicable Emission Limitations and/or Control Requirements

1. The ambient concentration of Be in the vicinity of the facility shall not exceed 0.01 ug/cu m, 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 implemented control measures for these emission units and all other Be emitting emission units at the facility.
2. The permittee shall maintain 0 percent opacity, as a six minute average, from the building housing emissions units P082, P083, P084, P085, P086, and P087.

B. Operational Restrictions

None.

C. Monitoring and Recordkeeping Requirements

1. The permittee shall properly install, calibrate, and maintain monitoring devices for pressure drop, in accordance with the manufacturer's specifications, on the particulate control devices for each emissions unit. The pressure drop(s) determined either during the most recent demonstration of compliance or through studies conducted by the permittee, to represent proper operation of the control devices, shall be maintained, at all times, when the emissions units are in operation. Operation of the particulate control devices outside the established parameters may be considered by the Ohio EPA to be unacceptable operation and maintenance of the control system. The permittee may petition the EPA for reestablishment of these parameters whenever warranted.
2. The permittee shall record the pressure drop across each particulate control device on a once per shift basis.
3. The permittee shall operate an ambient monitoring network in compliance with the provisions of 40 CFR 61.34 and as approved by the Ohio EPA. All sites and monitors are to be quality assured in accordance with 40 CFR 58, Appendix A (The requirements listed as for lead are to be followed). This will require quarterly audits of at least 25 percent of the monitoring site and collocated monitors in the following schedule (Table A-1):

1 - 5 sites	1 collocated monitor
6 - 20 sites	2 collocated monitors
>20 sites	3 collocated monitors

The collocated monitors are to be at the highest reading sites as per 40 CFR 58.

Ohio EPA reserves the option to perform quality assurance audits on the monitors upon at least a fourteen-day notice ahead of time to the permittee.

4. The permittee shall maintain annual records of the hours of operation for emissions units P082, P083, P084, P085, P086, and P087.

D. Reporting Requirements

1. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of any deviations (excursions) from emissions limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, the probable cause of such deviations, and any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA 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 quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)
2. A report of all concentrations monitored by the ambient monitoring network required by condition (d)(4) above shall be submitted by registered letter every 30 days to the Northwest District Office of the Ohio EPA. The data are also to be submitted in Aerometric Information and Retrieval system (AIRS) format on forms provided by the Ohio EPA unless the data are transmitted by electronic means or on computer disk in AIRS format to the Ohio EPA within 30 days of the end of each month.
3. Within 6 months from the issuance of this permit, the permittee shall submit a report which identifies the operational pressure drop ranges for all particulate matter control devices for emissions units P082, P083, P086, and P087. If startup of equipment has not occurred by this date, the permittee may request an extension for this reporting.

E. Testing Requirements/Compliance Method Determinations

1. Emission Limitation

P082 and P083: 0.028 pound PM/hr(each), 0.12 ton
PM/year (each)

Applicable Compliance Method

The test method employed to demonstrate compliance with these emissions limits shall be 40 CFR 60 Appendix A Method 5. The permittee may calculate annual emissions utilizing the results of the most recent compliance test and the number of hours the emissions unit was operated.

2. Emission Limitation

P082 and P083: 0.0048 pound Be/hour (each), 0.02 ton
Be/year (each)

Applicable Compliance Method

The test method employed to demonstrate compliance with these emissions limits shall be 40 CFR 61 Appendix B Method 104. The permittee may calculate annual emissions from the results of the most recent compliance test and the number of hours the emissions unit was operated.

3. Emission Limitation

P084 and P085: 0.050 pound NO_x/hour (each) 0.219
ton NO_x/year (each)
0.006 pound PM/hour (each) 0.026 ton
PM/year (each)

Applicable Compliance Method

The test method employed to demonstrate compliance with these emissions limits shall be 40 CFR 60 Appendix A Method 7 (NO_x) and Method 5 (PM). In the absence of Ohio EPA requiring such testing, the permittee may calculate the actual emission rates for these emissions units utilizing AP-42 emission factors (Section 1.4).

4. Emission Limitation

P086 and P087: 0.000046 pound PM/hour (each),
0.0002 ton PM/year (each)

Applicable Compliance Method

The test method employed to demonstrate compliance with these emissions limits shall be 40 CFR 60 Appendix A

Method 5. In the absence of Ohio EPA requiring such testing, the permittee may calculate the actual PM emission rate for these emissions units utilizing the

emissions unit and control equipment manufacturer information as specified by the permittee in its PTI application number 03-0823 submitted August 7, 1997.

5. Emission Limitation

P086 and P087: 0.0000079 pound Be/hour (each),
 0.000035 ton Be/year (each)

Applicable Compliance Method

The test method employed to demonstrate compliance with these emissions limits shall be 40 CFR 61 Appendix B Method 104. In the absence of Ohio EPA requiring such testing, the permittee may calculate the actual Be emission rate for this emissions unit utilizing the PM methodology as specified above and laboratory analysis information on percent Be.

6. Emission Limitation

P087: 0.000051 pound PM/hour (each);
 0.00022 ton PM/year (each)

Applicable Compliance Method

The test method employed to demonstrate compliance with these emissions shall be 40 CFR 60 Appendix A Method 5. In the absence of Ohio EPA requiring such testing, the permittee may calculate the actual PM emission rate for these emissions units utilizing the emissions unit and control equipment manufacturer information as specified by the permittee in its PTI application number 03-0823 submitted August 7, 1997.

7. Emission Limitation

P087: 0.0000087 pound Be/hour (each)
 0.000038 ton Be/year (each)

Applicable Compliance Method

The test method employed to demonstrate compliance with these emissions limits shall be 40 CFR 61 Appendix B Method 104. In the absence of Ohio EPA requiring such testing, the permittee may calculate the actual Be emission rate for this emissions unit utilizing the PM methodology as specified above and laboratory analysis information on percent Be.

8. The permittee shall conduct, or have conducted, emission testing for emissions units P082 and P083 in accordance with the following requirements:
 - a. the emission testing shall be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup of the equipment;
 - b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulate matter and beryllium;
 - c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 5, 40 CFR 60, Appendix A, and Method 104, 40 CFR 61, Appendix B. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,
 - d. the test(s) shall be conducted while the emissions units are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northwest District Office.

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 Northwest District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northwest District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northwest District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northwest District Office.

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9. Visible Emissions Restrictions

20 percent opacity, except as provided by rule (for all emissions units)

Applicable Compliance Method

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

F. **Miscellaneous Requirements**

None.