OhioEPA
State of Ohio Environmental Protection Agency

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
Trumbull County
Application No: 02-0988

CERTIFIED MAIL

May 14, 1997

OGELBAY NORTON ENGINEERED MATERIALS
MICHAEL GARGASZ
101 TIDEWATER RD. N.E.
WARREN, OH 44483

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 Board of Review 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 Board of Review 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 Board. An appeal may be filed with the Environmental Board of Review at the following address:

Environmental Board of Review
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

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

cc: US EPA
NORTHEAST DISTRICT OFFICE, DAPC
RON FOLLMER, VENTURA ENGINEERING

RECEIVED
MAY 19 1997
OHIO EPA NEDO

State of Ohio Environmental Protection Agency

Permit to Install
Terms and Conditions

Application No. 02-0988
APS Premise No. 0278080692
Permit Fee: $2600.00

Name of Facility: OGELBAY NORTON ENGINEERED MATERIALS

Person to Contact: MICHAEL GARGASZ

Address: 101 TIDEWATER RD. N.E.
WARREN, OH 44483

Location of proposed source(s): 101 TIDEWATER RD N.E.
HOWLAND, OHIO

Description of proposed source(s):
SLAG RECLAIM OPERATION: STORAGE PILES, PRIMARY CRUSHER, NATU RAL GAS FIRED ROTARY DRYER, PROCESSING PLANT W/ SILOS.

Date of Issuance: May 14, 1997

Effective Date: May 14, 1997

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

Donald R Schregardus

Director

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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 OGELBAY NORTON ENGINEERED MATERIALS located in Trumbull 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.

Ohio EPA Source Number	Source Identification Description	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
F009	Slag storage piles	PM: No visible emissions except for 1 minute in any 60 minute period	3745-31-05 3745-17-08 3745-17-07 3745-15-07	PM: No visible emissions except for 1 minute in any 60 minute period; 1.34 TPY
F010	Slag crusher and screener #1	PM: Visible emissions not to exceed 5% opacity as a 6 minute average, 2.0 lbs/hr	3745-31-05 3745-17-08 3745-17-07 3745-15-07	PM: Visible emissions not to exceed 5% opacity as a 6 minute average; 2.0 pounds/hour; 8.8 TPY
P002	Slag dryer	Use of a fabric filter	3745-31-05 3745-17-11 3745-17-07 3745-15-07	PM: 0.022 gr/dscf of exhaust gases and 0.94 pound/hour; 4.1 TPY NO_x: 0.14 lb/MMBTU heat input; 4.9 TPY SO_2: 0.2 lb/MMBTU heat input; 7.0 TPY
P003	Slag processing plant and silos	Use of a fabric filter	3745-31-05 3745-17-11 3745-17-07 3745-15-07	PM: 0.02 gr/dscf of exhaust gases, 0.86 pound/hour. Visible emissions not to exceed 5% as a six minute average. 3.8 TPY

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year
PM	18.0
NO_x	4.9
SO_2	7.0

PERFORMANCE TEST REQUIREMENTS

The permittee shall conduct, or have conducted, performance testing on the air contaminant source(s) in accordance with procedures approved by the Agency. Two copies of the written report describing the test procedures followed and the results of such tests shall be submitted and signed by the person responsible for the test. The Director, or an Ohio EPA representative, shall be allowed to witness the test, examine testing equipment, and require the acquisition or submission of data and information necessary to assure that the source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment.

A. A completed Intent to Test form shall be submitted to the appropriate Ohio EPA District Office or Local Air Pollution Control Agency where the original permit application was filed. This notice shall be made 30 days in advance and shall specify the source operating parameters, the proposed test procedures, and the time, date, place and person(s) conducting such tests.

B. Two copies of the test results shall be submitted within 30 days after the completion of the performance test.

C. Tests shall be performed for the following source(s) and pollutants(s):

Source	Pollutants
P002	PM

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 Northeast District Office - DAPC, 2110 East Aurora Road, Twinsburg, Ohio 44087.

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.

NINETY DAY OPERATING PERIOD

The facility will be permitted to operate during a 90-day period in accordance with OAC Rule 3745-35-02(C)(4)(b). The purpose of this period of operation is to fulfill the performance tests conditions used in the determination of compliance with the provisions of this Permit to Install or other applicable Ohio EPA rules.

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

A. PTI Number 02-0988 is for the installation of a steel slag reclaiming plant consisting of the following emissions units: slag storage piles (F009, slag crusher and screener (F010), slag dryer (P002), and slag processing equipment and storage

silos (P003). Particulate emissions from P002 and P003 shall be controlled by fabric filter baghouses.

B. Allowable Emission Limitation(s)

1. Slag storage piles (F009):

a. there shall be no visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period.

N.R. 2. Primary crusher and screener (F010):

a. visible particulate emissions shall not exceed 5% opacity as a 6 minute average.

R. 3. Slag dryer (P002):

a. the emission of particulate matter from the fabric filter's exhaust stack shall not exceed 0.022 grain per dry standard cubic foot of exhaust gases and 0.94 pound per hour;

b. the emission of oxides of nitrogen shall not exceed 0.14 pound/MMBTU actual heat input and 1.12 pounds per hour;

c. the emission of sulfur dioxide shall not exceed 0.2 lb/MMBTU actual heat input and 1.6 pounds per hour;

d. the opacity of particulate matter from the fabric filter's exhaust stack shall not exceed 5% on a six minute average.

R. 4. Slag processing plant (P003):

a. the emission of particulate matter from the fabric filter's exhaust stack shall not exceed 0.02 grain per dry standard cubic foot of exhaust gases and 0.86 pound per hour; and

b. the opacity of particulate matter from the fabric filter's exhaust stack shall not exceed 5% on a six minute average.

C. Operational Restrictions

1. Slag processed in the equipment covered by this permit shall be from electric furnaces. Prior to processing other types of material (including blast furnace slag), the permittee shall notify the Ohio EPA, Northeast District Office, Division of Air Pollution Control in

writing. Processing of other materials may require the application of an Ohio EPA permit to install in accordance with the definition of "modification" in OAC Rule 3745-31-01.

2. The collection efficiency of the air pollution capture hoods on emissions unit P003 shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at all points of capture. This shall include: two-deck screener, all belt conveyor transfer points, bucket elevator transfer points, storage silos and weigh bins. The permittee shall maintain all hoods and enclosures in good operating condition. Additional capture hooding or enclosures shall be installed if required by the Ohio EPA.

3. The air pollution control system on emissions unit P003 shall be operated with sufficient volumetric flow rate to minimize or eliminate visible particulate emissions at the point(s) of capture to the extent possible with good engineering design.

4. The drop height of the stacker used in the formation of the slag storage piles shall be kept at a minimum.

5. The moisture content of the slag shall be high enough to meet the visible emission limits specified in Term B (1) and (2).

D. <u>Monitoring and Recordkeeping Requirements</u>

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the fabric filter baghouses while emissions units P002 and P003 are in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

E. <u>Testing Requirements</u>

1. The permittee shall conduct, or have conducted, emission testing for emissions unit P002 (slag dryer) in accordance with the following requirements:

   a. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate matter from the fabric filter baghouse;

   b. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 of 40 CFR Part 60, Appendix A;

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

d. not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA's Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the 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 (i.e. stack test contractor) and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the test(s).

2. Compliance with the visible emission requirements of this permit shall be determined by U.S. EPA Reference Method 22 (Emissions Unit F009) and Reference Method 9 (Emissions Units F010, P002 and P003).

F. Miscellaneous Requirements

1. The equipment covered by this permit shall not cause a violation of OAC Rule 3745-15-07, "Air Pollution Nuisances Prohibited". If the Ohio EPA determines that the emissions units are contributing to or causing a nuisance, the permittee shall immediately adopt additional control measures.

2. The permittee shall estimate annual actual PM and PM_{10} emissions from the emissions units covered by the permit and from the existing emissions units at the facility. This estimate shall be done using engineering calculations, emission factors, material balance

calculations or performance testing results. The data shall be submitted to the Ohio EPA, Northeast District Office-DAPC, no later than February 1 of each year.