



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
JEFFERSON COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 17-1660

DATE: December 8, 1999

Olympic Mill Services
Keith Pyles
1014 West 9th Street
King of Prussia, PA 19406

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 within thirty (30) days after the notice of the Directors 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 and Permit Section
Division of Air Pollution Control

cc: USEPA
DAPC, SEDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: December 8, 1999

FINAL PERMIT TO INSTALL 17-1660

Application Number: 17-1660
APS Premise Number: 1741090127
Permit Fee: **\$1000**
Name of Facility: Olympic Mill Services
Person to Contact: Keith Pyles
Address: 1014 West 9th Street
King of Prussia, PA 19406

Location of proposed air contaminant source(s) [emissions unit(s)]:
**Commercial Avenue & Cool Springs Road
Mingo Junction, Ohio**

Description of proposed emissions unit(s):
BLAST FURNACE AND BASIC OXYGEN FURNACE SLAG PROCESSING PLANT.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

3. Records Retention Requirements

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.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. 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 emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

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

7. 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.

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

The proposed emissions unit(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 emissions unit(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 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 prove to be inadequate or cannot meet applicable standards.

10. 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.

11. 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).

12. 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.

13. Source Operation and Operating Permit Requirements 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, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

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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.

15. 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 this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	4.19

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Plant material handling operations including conveyors, conveyor transfer points, crushers, and screens	OAC rule 3745-31-05	Visible particulate emissions shall not exceed ten per cent opacity as a six-minute average (see A.2.g, below); Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.b through A.2.g); 4.12 lbs PM/hr maximum emissions; 4.19 tons PM/yr maximum emissions;
	OAC rule 3745-17-07(B) OAC rule 3745-17-08(B)	Less stringent than, or equally stringent to, the above-mentioned visible emission limitation

2. Additional Terms and Conditions

2.a The material handling operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:

- i. All conveyors in the slag processing plant (24) and associated transfer points;
- ii. All radial stacking conveyor drop points (10);
- iii. 2236 jaw crusher;
- iv. 45" FH cone crusher;
- v. SECO 48" x 20' vibrating grizzly feeder;
- vi. SECO 5' x 12' double deck screen;
- vii. SECO 6' x 16' triple deck screen (2);
- viii. SECO 8' x 20' triple deck screen.

2.b The permittee shall employ best available control measures for the above-identified material handling operation(s) for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the submitted permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

material handling operation(s)	control measure(s)
All conveyors and associated transfer points	Use of dedicated water sprays to continuously wet slag throughout processing (each transfer point within the processing plant shall be equipped with a sprayer capable of delivering enough water to meet visible emissions requirements); Minimize drop height
All radial stacking conveyor drop points (10)	Use of dedicated water sprays to continuously wet slag throughout processing (each radial stacking conveyor shall be equipped with a sprayer capable of delivering enough water to meet visible emissions requirements); Minimize drop height

SECO 48" x 20' vibrating grizzly feeder	Use of dedicated water sprays to continuously wet slag feed material to meet visible emissions limitations; Minimize front end loader bucket-to-feeder drop height
All crushers	Use of dedicated continuous water spray at crusher entry point to meet visible emissions limitations; Use of dedicated continuous water spray at crusher exit point to meet visible emissions limitations; Minimize drop height
All screens	Use of dedicated continuous water spray at each screen to meet visible emissions limitations; Minimize drop height

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance, as described below.

- 2.c** For each material handling operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that use of these additional control measure(s) is unnecessary.
- 2.d** Specific additional control measures shall be determined by the permittee. Such additional control measures may include increased water application, use of chemical dust suppressant, or shut-down of operations. The use of additional control measures shall, at all times, comply with all air, surface water, ground water, solid waste, and hazardous waste laws and regulations.
- 2.e** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

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Facility ID: **1741090127**

Emissions Unit ID: F014

- 2.f** All specific sources listed in 2.b, above shall comply with OAC rules 3745-17-13 (B)(2) and (D)(3). For purposes of compliance with Ohio's SIP, OMS shall be considered a subsequent operator of International Mill Service's "slag and steel scrap separating operations" (F002, F004 and F005) and Lafarge's "slag processing operations" (F003 and F004). These sources have been replaced with new equipment. Limits stated above result from the use of best available technology established through the OAC rules listed above.

B. Operational Restrictions

1. All transfer points, screens, and crushers identified in 2.b, above within the processing plant shall be equipped with a dedicated water spray. In the case of failure or malfunction of any individual water spray, the failure or malfunction shall be reported as described in D.1.c and D.1.d, below.
2. In the event of failure or malfunction of a pump affecting more than one water spray location, the permittee shall evaluate visible emissions from such affected points upon discovery. Should observations indicate a potential or actual violation of visible emissions limitations, the permittee shall perform one or more of the following until normal control measures are restored:
 - a. utilize portable water sprays at the affected locations;
 - b. shut down the affected sources until repairs are made; and,
 - c. increase water flow to "upstream" conveyors to ensure that slag maintains sufficient moisture to prevent visible emissions violations from points of malfunctioning sprayers.

C. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

material handling operation(s)	minimum inspection frequency
All conveyors and associated transfer points	Monitoring every two hours during use, minimum
All radial stacking conveyor drop points	Monitoring every two hours during use, minimum
All crushers, screens, and feeders	Monitoring every two hours during use, minimum

2. The above-mentioned inspections shall be performed during representative, normal operating conditions.
3. The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
4. The permittee shall maintain records of the following information:

- a. the date and reason any required inspection was not performed;
- b. The date of each inspection where it was determined that a malfunction occurred in any individual water spray or pump servicing the slag processing plant (conveyors, transfer points, drop points, screens, feeder, and/or crushers);
- c. the date of each inspection where it was determined by the permittee that it was necessary to implement additional control measure(s);
- d. the dates that the additional control measure(s) was (were) implemented;
- e. a description of the additional controls implemented; and,
- f. on a calendar quarter basis, the total number of days additional control measure(s) was (were) implemented.

The information in 4.f shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

D. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each day during which an inspection was not performed by the required frequency; and,
 - b. each instance when an additional control measure, that was to be performed as a result of an inspection, was not implemented; and,
 - c. each day that an inspection indicated a malfunction of any individual water spray or pump; and,
 - d. the dates that replacement or repair parts were ordered and installed for D.1.c, above.
2. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

Emissions Unit ID: F014

1. Compliance with the visible emission limitation of 10 per cent as a six-minute average for all material handling operations, crushers, and screens identified above shall be determined in accordance with USEPA Method 9 as described in 40 CFR 60, Appendix A.
2. Compliance with the hourly emissions limitation of 4.12 lb PM/hr shall be determined through the following methods using the following emissions factors:

Conveyor transfer points = 4.8×10^{-5} lb PM/ton material processed;

Feeder loading = 0.01258 lb PM/ton material processed, as derived from equation 1 of AP-42 Section 13.2.4;

Screening = 0.00084 lb PM/ton material processed;

Crushing = 0.0024 lb PM/ton material processed.

These emissions factors are found in AP-42, Table 11.19.2-2. These factors shall be used in the following equation:

$$H_{total} = H_t + H_f + H_c + H_s$$

where

H_{total} = total hourly emissions for all transfer points, feeder, crushers, and screens

H_t , H_f , H_c , and H_s shall be found individually through the following equations:

Transfer points

$$H_t = (4.8 \times 10^{-5} \text{ lb PM/ton}) * 2.1 * \sum_{i=1}^n T_i$$

where

H_t = hourly PM emissions from transfer points (lb PM/hr)

T_i = hourly throughput at transfer point "i", tons/hr

n = maximum number of transfer points in the plant (1 to n)

Feeder loading

$$H_f = T_f * [k * 0.0032 * ((u/5)^{1.3}) / ((m/2)^{1.4})] * (1 - 0.90)$$

where

Hf = hourly PM emissions for feeder loading (lb PM/hr)

Tf = hourly throughput for feeder loading, tons/hr

k = particle size multiplier, 0.74 (AP-42, Page 13.2.4-3)

u = mean wind speed for Wheeling, WV (as supplied by permittee), 7.83 mph

m = slag moisture content, 0.92% (AP-42, Table 13.2.4-1)

Crushers

$$H_c = (0.0024 \text{ lb PM/ton}) * 2.1 * (1 - 0.75) * \sum_{i=1}^n T_i$$

where

Hc = hourly PM emissions for crushers (lb PM/hr)

Ti = hourly throughput at crusher "i", tons/hr

n = maximum number of crushers in the plant (1 to n)

Screens

$$H_s = (0.00084 \text{ lb PM/ton}) * 2.1 * \sum_{i=1}^n T_i$$

where

Hs = hourly PM emissions for screens (lb PM/hr)

Ti = hourly throughput at screen "i", tons/hr

n = maximum number of screens in the plant (1 to n)

3. Compliance with the annual emissions limitation of 4.19 tons PM/yr shall be determined through the following methods using the following emissions factors:

Conveyor transfer points = 4.8×10^{-5} lb PM/ton material processed;

Feeder loading = 0.01258 lb PM/ton material processed, as derived from equation 1 of AP-42 Section 13.2.4;

Screening = 0.00084 lb PM/ton material processed;

Crushing = 0.0024 lb PM/ton material processed.

These emissions factors are found in AP-42, Table 11.19.2-2. These factors shall be used in the following equation:

$$A_{total} = A_t + A_f + A_c + A_s$$

where

A_{total} = total annual emissions for all transfer points, feeder, crushers, and screens

A_t , A_f , A_c , and A_s shall be found individually through the following equations:

Transfer points

$$A_t = (4.8 \times 10^{-5} \text{ lb PM/ton}) * 2.1 / 2000 * \sum_{i=1}^n T_i$$

where

A_t = annual PM emissions from transfer points (tons PM/yr)

T_i = annual throughput at transfer point "i", tons/yr

n = maximum number of transfer points in the plant (1 to n)

Feeder loading

$$A_f = T_f * [k * 0.0032 * ((u/5)^{1.3}) / ((m/2)^{1.4})] * (1 - 0.90) / 2000$$

where

A_f = annual PM emissions for feeder loading (tons PM/yr)

T_f = annual throughput for feeder loading, tons/yr

k = particle size multiplier, 0.74 (AP-42, Page 13.2.4-3)

u = mean wind speed for Wheeling, WV (as supplied by permittee), 7.83 mph

m = slag moisture content, 0.92% (AP-42, Table 13.2.4-1)

Crushers

$$A_c = (0.0024 \text{ lb PM/ton}) * 2.1 * (1 - 0.75) / 2000 * \sum_{i=1}^n T_i$$

where

A_c = annual PM emissions for crushers (tons PM/yr)

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T_i = annual throughput at crusher "i", tons/yr
 n = maximum number of crushers in the plant (1 to n)

Screens

$$A_s = (0.00084 \text{ lb PM/ton}) * 2.1 / 2000 * \sum_{i=1}^n T_i$$

where

A_s = annual PM emissions for screens (tons PM/yr)
 T_i = annual throughput at screen "i", tons/yr
 n = maximum number of screens in the plant (1 to n)

F. Miscellaneous Requirements

None.