



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
FULTON 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: 03-13621

DATE: 9/11/2001

HST - Delta Recycling Facility
Eric Cernak
PO Box 5024 One State Street
Hartford, CT 061025024

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

NWDO



**Permit To Install
Terms and Conditions**

**Issue Date: 9/11/2001
Effective Date: 9/11/2001**

FINAL PERMIT TO INSTALL 03-13621

Application Number: 03-13621
APS Premise Number: 0326000194
Permit Fee: **\$3600**
Name of Facility: HST - Delta Recycling Facility
Person to Contact: Eric Cernak
Address: PO Box 5024 One State Street
Hartford, CT 061025024

Location of proposed air contaminant source(s) [emissions unit(s)]:

**County Road 10
Delta, Ohio**

Description of proposed emissions unit(s):

Waste oxide recycling facility.

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

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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

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Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit 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 cannot meet the requirements of this permit 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.

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Issued

Facility ID: 0326000194

Emissions Unit ID: B001

14. 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.

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>
NO _x	53.50
CO	78.11
PE	63.58
OC	8.16
SO ₂	28.43
ammonia	43.54
Pb	1.71

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

A. Applicable Emissions Limitations and/or Control Requirements

- 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>
B001 - 56.56 MMbtu/hr natural gas fired boiler	OAC rule 3745-31-05(A)(3)	This rule also includes compliance with OAC rule 3745-17-07(A), OAC rule 3745-17-10(B), and 40 CFR Part 60, Subpart Dc.
		See A.2.a.
		2.83 lbs nitrogen oxides (NO _x)/hr, 12.40 TPY
		4.75 lbs carbon monoxide (CO)/hr, 20.81 TPY
		0.43 lb particulate emissions (PE)/hr, 1.88 TPY
		0.62 lb organic compounds (OC)/hr, 2.72 TPY
	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity as a six-minute average, except as provided by rule
	OAC rule 3745-17-10(B)(1)	0.02 lbs PE/MMbtu heat input
	40 CFR Part 60, Subpart Dc	Recordkeeping Requirements (See C.1)

2. Additional Terms and Conditions

- 2.a** Best Available Technology (BAT) for this emissions unit has been determined to be the use of low NOx burners.

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain records of the amounts of each fuel combusted during each day.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit:
- a. construction date (no later than 30 days after such date);
 - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. actual start-up date (within 15 days after such date); and
 - d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

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

E. Testing Requirements

1. Compliance Method Requirements: Compliance with the emission limitations in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emissions Limitation: 2.83 lbs NO_x/hr, 12.40 tons NO_x/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 50 lbs NO_x/mm cu. ft. of natural gas, Table 1.4-1 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emissions Limitation: 4.75 lbs CO/hr, 20.81 tons CO/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 84 lbs CO/mm cu. ft. of natural gas, Table 1.4-1 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emissions Limitation: 0.43 lb PE/hr, 1.88 tons PE/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 7.6 lbs PE/mm cu. ft. of natural gas, Table 1.4-2 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is

Emissions Unit ID: B001

shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emissions Limitation: 0.62 lbs OC/hr, 2.72 tons OC/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 11.0 lbs OC/mm cu. ft. of natural gas, Table 1.4-2 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mm cu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 18, 25 or 25A of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation pursuant to OAC Rule 3745-17-03(B)(1).

- f. Emission Limitation: 0.020 lb PE/mmBtu actual heat input

Applicable Compliance Method: The permittee shall demonstrate compliance with this limitation by multiplying the appropriate emission factor from AP-42, Table 1.4-2 (revised 7/98) [7.6 lbs PE /mmcu.ft], and by a heat content of 1000 Btu/scf. If required, compliance shall be determined in accordance with OAC rule 3745-17-03(B)(9).

F. Miscellaneous Requirements

None

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>	40 CFR Part 60, Subpart Dc
B002 - 56.56 MMbtu/hr natural gas fired boiler	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-10(B)(1)	

**HST -
PTI A
Issued: 9/11/2001**

Emissions Unit ID: **B002**

Applicable Emissions
Limitations/Control Measures

This rule also includes compliance with OAC rule 3745-17-07(A), OAC rule 3745-17-10(B), and 40 CFR Part 60, Subpart Dc.

See A.2.a.

2.83 lbs nitrogen oxides (NO_x)/hr,
12.40 TPY

4.75 lbs carbon monoxide (CO)/hr,
20.81 TPY

0.43 lb particulate emissions
(PE)/hr, 1.88 TPY

0.62 lb organic compounds
(OC)/hr, 2.72 TPY

Visible PE shall not exceed 20% opacity as a six-minute average, except as provided by rule

0.02 lbs PE/MMbtu heat input

Recordkeeping Requirements (see C.1.)

2. Additional Terms and Conditions

- 2.a** Best Available Technology (BAT) for this emissions unit has been determined to be the use of low NO_x burners.

B. Operational Restrictions

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

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PTI Application: 03-13601

Issued

Facility ID: 0326000194

Emissions Unit ID: B002

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain records of the amounts of each fuel combusted during each day.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit:
 - a. construction date (no later than 30 days after such date);
 - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. actual start-up date (within 15 days after such date); and
 - d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

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

E. Testing Requirements

1. Compliance Method Requirements: Compliance with the emission limitations in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emissions Limitation: 2.83 lbs NOx/hr, 12.40 tons NOx/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by

multiplying the AP-42 emission factor of 50 lbs NO_x/mm cu. ft. of natural gas, Table 1.4-1 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emissions Limitation: 4.75 lbs CO/hr, 20.81 tons CO/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 84 lbs CO/mm cu. ft. of natural gas, Table 1.4-1 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emissions Limitation: 0.43 lb PE/hr, 1.88 tons PE/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 7.6 lbs PE/mm cu. ft. of natural gas, Table 1.4 (revised 2/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emissions Limitation: 0.62 lbs OC/hr, 2.72 tons OC/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 11.0 lbs OC/mm cu. ft. of natural gas, Table 1.4-2 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mm cu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 18, 25 or 25A of 40 CFR Part 60, Appendix A.

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The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation pursuant to OAC Rule 3745-17-03(B)(1).

- f. Emission Limitation: 0.020 lb PE/mmBtu actual heat input

Applicable Compliance Method: The permittee shall demonstrate compliance with this limitation by multiplying the appropriate emission factor from AP-42, Table 1.4-2 (revised 7/98) [7.6 lbs PE /mmcu.ft], and by a heat content of 1000 Btu/scf. If required, compliance shall be determined in accordance with OAC rule 3745-17-03(B)(9).

F. Miscellaneous Requirements

None

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

A. Applicable Emissions Limitations and/or Control Requirements

- 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>
B003 - 56.56 MMbtu/hr natural gas fired boiler	OAC rule 3745-31-05(A)(3)	This rule also includes compliance with OAC rule 3745-17-07(A), OAC rule 3745-17-10(B), and 40 CFR Part 60, Subpart Dc.
		See A.2.a.
		2.83 lbs nitrogen oxides (NOx)/hr, 12.40 TPY
		4.75 lbs carbon monoxide (CO)/hr, 20.81 TPY
		0.43 lb particulate emissions (PE)/hr, 1.88 TPY
		0.62 lb organic compounds (OC)/hr, 2.72 TPY
	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity as a six-minute average, except as provided by rule
	OAC rule 3745-17-10(B)(1)	0.02 lbs PE/MMbtu heat input
	40 CFR Part 60, Subpart Dc	Recordkeeping Requirements (See

C.1)

2. Additional Terms and Conditions

- 2.a** Best Available Technology (BAT) for this emissions unit has been determined to be the use of low NO_x burners.

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain records of the amounts of each fuel combusted during each day.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit:
- a. construction date (no later than 30 days after such date);
 - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. actual start-up date (within 15 days after such date); and
 - d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and Ohio EPA, Northwest District Office
347 North Dunbridge Road

Bowling Green, OH 43402

E. Testing Requirements

1. Compliance Method Requirements: Compliance with the emission limitations in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emissions Limitation: 2.83 lbs NO_x/hr, 12.40 tons NO_x/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 50 lbs NO_x/mm cu. ft. of natural gas, Table 1.4-1 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emissions Limitation: 4.75 lbs CO/hr, 20.81 tons CO/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 84 lbs CO/mm cu. ft. of natural gas, Table 1.4-1 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emissions Limitation: 0.43 lb PE/hr, 1.88 tons PE/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 7.6 lbs PE/mm cu. ft. of natural gas, Table 1.4-2 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mmcu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating

schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emissions Limitation: 0.62 lbs OC/hr, 2.72 tons OC/yr

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the AP-42 emission factor of 11.0 lbs OC/mm cu. ft. of natural gas, Table 1.4-2 (revised 7/98) by the maximum natural gas burning capacity of the emissions unit (0.05656 mm cu. ft./hr). If required, compliance with the hourly limitation shall be determined in accordance with Method 18, 25 or 25A of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation pursuant to OAC Rule 3745-17-03(B)(1).

- f. Emission Limitation: 0.020 lb PE/mmBtu actual heat input

Applicable Compliance Method: The permittee shall demonstrate compliance with this limitation by multiplying the appropriate emission factor from AP-42, Table 1.4-2 (revised 7/98) [7.6 lbs PE /mmcu.ft], and by a heat content of 1000 Btu/scf. If required, compliance shall be determined in accordance with OAC rule 3745-17-03(B)(9).

F. Miscellaneous Requirements

None

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>
P001 - EAF Dust Handling System (2 railcar/truck pneumatic unloading, 2 EAF dust storage silos, 2 loss in weight feeders and 2 pneumatic conveyors)	OAC rule 3745-31-05(A)(3)	0.77 lb particulate emissions (PE)/hr, 3.37 TPY See A.2.a. Visible PE shall not exceed 0% opacity, as a six-minute average.
	OAC rule 3745-17-11(B)	None (see A.2.b)
	OAC rule 3745-17-07(A)	None (see A.2.c)

2. Additional Terms and Conditions

- 2.a Best Available Technology (BAT) for this emissions unit has been determined to be the use of a fabric filter with a maximum outlet concentration of 0.02 gr/dscf.
- 2.b The uncontrolled mass rate of particulate emissions from this emissions unit cannot be ascertained. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(i), this emissions unit is exempt from the requirements of OAC rule 3745-17-11(B)(2). Also, Table I does not apply because the facility is located in Fulton County.
- 2.c This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.

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B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

D. Reporting Requirements

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

E. Testing

1. Compliance Method Requirements: Compliance with the emission limitations in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.77 lb PE/hr, 3.37 TPY

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 4500 acfm (2250 acfm per bin vent), then multiplying by 60 min/hour and dividing by 7000 gr/lb. If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating

schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

- b. Emission Limitation: Visible PE shall not exceed 0% opacity, as a six-minute average

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation pursuant to Method 9 of 40 CFR Part 60, Appendix A.

F. Miscellaneous Requirements

None

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>
P002 - Coal Dust Handling (railcar/truck pneumatic unloading, coal dust storage silo, loss in weight feeders and pneumatic conveyor)	OAC rule 3745-31-05(A)(3)	0.39 lb particulate emissions (PE)/hr, 1.71 TPY (see A.2.a) Visible PE shall not exceed 0% opacity, as a six-minute average.
	OAC rule 3745-17-11(B)	None (see A.2.b)
	OAC rule 3745-17-07(A)	None (see A.2.c)

2. Additional Terms and Conditions

- 2.a Best Available Technology (BAT) for this emissions unit has been determined to be the use of a fabric filter with a maximum outlet concentration of 0.02 gr/dscf.
- 2.b The uncontrolled mass rate of particulate emissions from this emissions unit cannot be ascertained. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(i), this emissions unit is exempt from the requirements of OAC rule 3745-17-11(B)(2). Also, Table I does not apply because the facility is located in Fulton County.
- 2.c This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.

B. Operational Restrictions

1. The quality of the coal dust received shall have a sulfur content not to exceed 1.5% by weight in this emissions unit.

2. The permittee shall collect or require the coal supplier to collect a representative grab sample of each shipment of coal that is received for burning in the Rotary Hearth Furnace. The permittee shall perform or require the supplier to perform the coal sampling in accordance with ASTM method D2234, Collection of a Gross Sample of Coal and analyze the coal sample for sulfur content (percent). The analytical method for sulfur content shall be ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
2. For each shipment of coal received for burning in the Rotary Hearth Furnace, the permittee shall maintain records of the total quantity of coal received and the permittee's or coal supplier's analyses for sulfur content.

D. Reporting Requirements

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

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that exceeds a sulfur content of 1.5% by weight. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing

1. Compliance Method Requirements: Compliance with the emission limitations in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.39 lb PE/hr, 1.71 TPY

Applicable Compliance Method: The permittee shall demonstrate compliance by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 2250 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb. If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr limitation was developed by multiplying the lb/hr by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

- b. Emission Limitation: Visible PE shall not exceed 0% opacity, as a six-minute average

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation pursuant to Method 9 of 40 CFR Part 60, Appendix A.

F. Miscellaneous Requirements

None

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>
P003 - pyrometallurgical processing line; production of crude zinc oxide and direct reduced iron (DRI) [Line includes mixer, briquetter, screener, rotary hearth furnace (RHF), DRI cooler, DRI silo, crude zinc oxide product recovery - Baghouse 6100, crude zinc oxide silo] controlled by Baghouse 4300 and quench chamber/afterburner	OAC rule 3745-31-05(A)(3)	48.29 tons particulate emissions (PE)/yr See A.2.a. Emissions from Baghouse 6100 shall not exceed the following: 2.47 lbs carbon monoxide (CO)/hr, 10.82 TPY 6.49 lbs sulfur dioxide (SO ₂)/hr, 28.43 TPY 3.17 lbs nitrogen oxides (NO _x)/hr, 13.88 TPY 0.39 lbs lead (Pb)/hr, 1.71 TPY Control requirements (see A.2.b) Visible emission restrictions (see A.2.c)
	OAC rule 3745-17-11(B)	None (see A.2.d)
	OAC rule 3745-17-07(A)	None (see A.2.e)

2. Additional Terms and Conditions

- 2.a The total PE limitation is comprised of four (4) emission points of which, the individual lb/hr PE shall not exceed the following:

EGRESS POINTS	lb/hr
baghouse 4300	1.71
product recovery BH 6100	8.75
bin vent - DRI cooling	0.49
bin vent - crude zinc silo	0.07

- 2.b Best Available Technology (BAT) for this emissions unit has been determined to be the use of the following:

- i. enclosed conveying systems controlled by a fabric filter (Baghouse 6100) with a maximum outlet concentration of 0.02 gr/dscf.
- ii. low NO_x burners in the rotary hearth furnace (RHF).
- iii. quench/afterburner system designed for a 1.5 residence time.
- iv. baghouse control (Baghouse 4300) of the mixer, briquetter and screener, with a maximum outlet concentration of 0.02 gr/dscf.

2.c	<u>Stack Identification</u>	<u>Opacity restriction (as a six-minute average)</u>
	Baghouse 4300	20%
	Baghouse 6100	20%
	DRI Cooling bin vent	0%
	Crude zinc silo bin vent	0%

- 2.d The uncontrolled mass rate of particulate emissions from this emissions unit cannot be ascertained. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(i), this emissions unit is exempt from the requirements of OAC rule 3745-17-11(B)(2). Also, Table I does not apply because the facility is located in Fulton County.

- 2.e This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.

B. Operational Restrictions

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1. The pressure drop across the Baghouse 4300 shall be maintained within the range of the manufacturer's written recommendation while the emissions unit is in operation (see D.3).
2. The average combustion temperature within the quench/afterburner system, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across Baghouse 4300 while the emissions unit is in operation. 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 pressure drop across the baghouse on a daily basis.
2. The permittee shall perform daily checks on the DRI silo, crude zinc oxide silo and Baghouse 6100, when in operation and when the weather conditions allow, for any visible particulate emissions from the vents and stacks serving these emissions units. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the quench/afterburner system when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information for each day:
 - a. all 3-hour blocks of time during which the average combustion temperature within the quench/afterburner system, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test

that demonstrated the emissions unit was in compliance; and,

- b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

D. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the Baghouse 4300 did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports for the DRI silo, crude zinc oxide silo and Baghouse 6100 which (a) identify all days during which any visible particulate emissions were observed from the vents and stacks serving these emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall submit a report six (6) months from start-up of the facility that provides normal operating parameters for Baghouse 4300 and the quench/afterburner system.
4. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the quench/afterburner system does not comply with the temperature limitation specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months of start up of this emissions unit
 - b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE, CO, SO₂, NO_x and Pb.
 - c. The following test method shall be employed to demonstrate compliance with the

allowable mass emission rate:

- i. for PE, Method 5 of 40 CFR Part 60, Appendix A.
 - ii. for CO, Method 10 of 40 CFR Part 60, Appendix A.
 - iii. for SO₂, Method 6 of 40 CFR Part 60, Appendix A.
 - iv. for NO_x, Method 7 or Method 20 of 40 CFR Part 60, Appendix A.
 - v. for Pb, Method 12 or Method 29 of 40 CFR Part 60, Appendix A.
- d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

2. Compliance Method Requirements: Compliance with the emission limitations in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emission Limitations: 48.27 TPY PE

Applicable Compliance Method: The tons/yr limitation was developed by multiplying the lb/hr of 11.02 (summation of individual hourly limitations) by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly

limitations, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 1.71 lbs PE/hr from baghouse 4300
0.49 lb PE/hr from DRI cooling bin vent
0.07 lb PE/hr from crude zinc silo bin vent

Applicable Compliance Method: The permittee shall demonstrate compliance with the 1.71 lb/hr emission limitation by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 10,000 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb.

The permittee shall demonstrate compliance with the 0.49 lb/hr emission limitation by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 2850 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb.

The permittee shall demonstrate compliance with the 0.07 lb/hr emission limitation by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 400 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb.

If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation: 8.75 lbs PE/hr from Baghouse 6100

Applicable Compliance Method: The 8.75 lbs/hr was developed by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 51,053 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb. Compliance with the lb/hr limitation shall be determined through the testing required in Section E.1 of the terms and conditions of the permit.

- d. Emission Limitation: 2.47 lbs CO/hr, 10.82 TPY from baghouse 6100

Applicable Compliance Method: The lb/hr was developed by multiplying the manufacturer's emission factor of 0.257 lb CO/ton briquettes by the maximum process weight rate of 9.62 ton/hour. Compliance with the lb/hr limitation shall be determined through the testing required in Section E.1 of the terms and conditions of the permit.

The tons/yr limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 6.49 lbs SO₂/hr, 28.43 TPY from baghouse 6100

Applicable Compliance Method: The lb/hr was developed by multiplying the manufacturer's emission factor of 0.675 lb SO₂/ton briquettes by the maximum process weight rate of 9.62 ton/hour. Compliance with the lb/hr limitation shall be determined through the testing required in Section E.1 of the terms and conditions of the permit.

The tons/yr limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation: 3.17 lbs NO_x/hr, 13.88 TPY from baghouse 6100

Applicable Compliance Method: The lb/hr was developed by multiplying the manufacturer's emission factor of 0.330 lb NO_x/ton briquettes by the maximum process weight rate of 9.62 ton/hour. Compliance with the lb/hr limitation shall be determined through the testing required in Section E.1 of the terms and conditions of the permit.

The tons/yr limitation was developed by multiplying the lb/hr limitation by the maximum

operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- g. Emission Limitation: 0.39 lb Pb/hr, 1.71 TPY from baghouse 6100

Applicable Compliance Method: The lb/hr was developed by multiplying the maximum outlet concentration of 0.00088 gr/dscf by the maximum volumetric air flow rate of 51,053 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb. Compliance with the lb/hr limitation shall be determined through the testing required in Section E.1 of the terms and conditions of the permit.

The tons/yr limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- h. Emission Limitation: 20% opacity as a six-minute average

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emission limitation pursuant to Method 9 of 40 CFR Part 60, Appendix A.

- i. Emission Limitation: 0% opacity as a six-minute average

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emission limitation pursuant to Method 9 of 40 CFR Part 60, Appendix A.

F. Miscellaneous Requirements

None

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>
P004 - Hydrometallurgical process line with two scrubbers & baghouse	OAC rule 3745-31-05(A)(3)	10.21 tons particulate emissions (PE)/yr (see A.2.a)
		2.45 tons nitrogen oxides (NOx)/yr (see A.2.a)
		4.86 tons carbon monoxide (CO)/yr (see A.2.a)
		43.54 tons ammonia (NH ₃)/yr (see A.2.a)
		Control Requirements (see A.2.b)
		Visible emission restrictions (see A.2.c)
	OAC rule 3745-17-11(B)	None (see A.2.d)
	OAC rule 3745-17-07(A)	None (see A.2.e)

2. Additional Terms and Conditions

- 2.a The annual limitations are comprised of multiple egress points of which the hourly emissions shall not exceed the following:

EGRESS POINTS	PE	NO _x	CO	NH ₃
	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)

1. The pressure drop (inches of water) across the Plant Scrubber and Evaporator Scrubber shall be continuously maintained at a value not less than the minimum value established by the manufacturer at all times while the emissions unit is in operation. (See D.3)

The scrubber water flow rate for the Plant Scrubber and Evaporator Scrubber (gallons per minute) shall be continuously maintained at a value not less than the minimum value established by the manufacturer at all times while the emissions unit is in operation. (See D.3)

2. The pressure drop across the Zinc Oxide Collection Baghouse shall be maintained within the range of the manufacturer's written recommendation while the emissions unit is in operation. (See D.3)

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across both scrubbers and the scrubbers water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
2. The permittee shall collect and record the following information each day:
 - a. the pressure drop across both scrubbers, in inches of water, on a daily basis.
 - b. the scrubbers water flow rate, in gallons per minute, on a daily basis.
 - c. a log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the Zinc Oxide Collection Baghouse while the emissions unit is in operation. 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 pressure drop across the baghouse on a once per shift basis.
4. The permittee shall perform daily checks on the Salt Spray Dryer Collector bin vent when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
5. The permit to install for this permit action as evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):
- a. Pollutant: ammonia
TLV (mg/m³): 17.41
Maximum Hourly Emission Rate (lbs/hr): 9.94
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 292.5
MAGLC (ug/m³): 414.52
 - b. Pollutant: zinc dust
TLV (mg/m³): 10
Maximum Hourly Emission Rate (lbs/hr): 1.12
Predicted 1-Hour maximum Ground-Level Concentration (ug/m³): 0.154
MAGLC (ug/m³): 238.0
6. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the

- handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
7. If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
8. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - a. the static pressure drop across the scrubber; and
 - b. the scrubber water flow rate.

These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

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2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the Salt Spray Dryer Collector bin vent (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall submit pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the Zinc Oxide Collection Baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
4. The permittee shall submit a report six (6) months from start-up of the facility that provides the normal operating parameters for the Plant Scrubber, Evaporator Scrubber and Zinc Oxide Collection Baghouse.

E. Testing Requirements

1. Compliance Method Requirements: Compliance with the emission limitations in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations: 10.21 TPY PE

Applicable Compliance Method: The tons/yr limitation was developed by multiplying the lb/hr of 2.33 (summation of individual hourly limitations) by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 2.24 lb PE/hr from zinc oxide collection baghouse stack
0.09 lb PE/hr from salt spray dryer bin vent

Applicable Compliance Method: The permittee shall demonstrate compliance with the 2.24 lb/hr emission limitation by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 13,047 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb.

The permittee shall demonstrate compliance with the 0.09 lb/hr emission limitation by multiplying the maximum outlet concentration of 0.02 gr/dscf by the maximum volumetric air flow rate of 507 acfm, then multiplying by 60 min/hour and dividing by 7000 gr/lb.

If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitations: 2.45 TPY NO_x

Applicable Compliance Method: The tons/yr limitation was developed by multiplying the lb/hr of 0.56 (summation of individual hourly limitations) by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 0.37 lb NO_x/hr from zinc oxide collection baghouse stack
0.19 lb NO_x/hr from plant scrubber stack

Applicable Compliance Method: The permittee shall demonstrate compliance with the

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0.37 lb/hr emission limitation by multiplying the AP-42 emission factor of 100 lbs NOx/mm cu. ft. of natural gas, Table 1.4 (revised 2/98) by the maximum natural gas burning capacity of the emissions unit (0.00372 mmcu. ft./hr).

The permittee shall demonstrate compliance with the 0.19 lb/hr emission limitation by multiplying the AP-42 emission factor of 100 lbs NOx/mm cu. ft. of natural gas, Table 1.4 (revised 2/98) by the maximum natural gas burning capacity of the emissions unit (0.00186 mmcu. ft./hr).

If required, compliance with the hourly limitation shall be determined in accordance with Method 7 of 40 CFR Part 60, Appendix A.

- e. Emission Limitations: 4.86 TPY CO

Applicable Compliance Method: The tons/yr limitation was developed by multiplying the lb/hr of 1.11 (summation of individual hourly limitations) by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

- f. Emissions Limitation: 0.74 lb CO/hr from zinc oxide collection baghouse stack
0.37 lb CO/hr from plant scrubber stack

Applicable Compliance Method: The permittee shall demonstrate compliance with the 0.74 lb/hr emission limitation by multiplying the manufacturer's emission factor of 200 lbs CO/mm cu. ft. of natural gas, by the maximum natural gas burning capacity of the emissions unit (0.00372 mmcu. ft./hr).

The permittee shall demonstrate compliance with the 0.37 lb/hr emission limitation by multiplying the manufacturer's emission factor of 200 lbs CO/mm cu. ft. of natural gas, by the maximum natural gas burning capacity of the emissions unit (0.00186 mmcu. ft./hr).

If required, compliance with the hourly limitation shall be determined in accordance with Method 10 of 40 CFR Part 60, Appendix A.

- g. Emission Limitations: 43.54 TPY NH₃

Applicable Compliance Method: The tons/yr limitation was developed by multiplying the lb/hr of 9.94 (summation of individual hourly limitations) by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

- h. Emissions Limitation: 8.44 lbs NH₃/hr from the plant scrubber stack
1.50 lbs NH₃/hr from the evaporator stack

Applicable Compliance Method: The permittee shall demonstrate compliance with the 8.44 lb/hr emission limitation by multiplying the manufacturer's emission factor of 121.6 lb/ton crude zinc oxide, by the maximum hourly production of crude zinc oxide (3.47 ton/hr) and applying a 98% control factor.

The permittee shall demonstrate compliance with the 1.50 lb/hr emission limitation by multiplying the manufacturer's emission factor of 21.6 lb/ton crude zinc oxide, by the maximum hourly production of crude zinc oxide (3.47 ton/hr) and applying a 98% control factor.

If required, compliance with the hourly limitation shall determined by an approved test method of the Ohio EPA.

- i. Emissions Limitation: 0% opacity as a six-minute average

Applicable Compliance Method: Method 9 of 40 CFR Part 60, Appendix A

- j. Emissions Limitation: 20% opacity as a six-minute average

Applicable Compliance Method: Method 9 of 40 CFR Part 60, Appendix A

F. Miscellaneous Requirements

None