



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
CLARK 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: 08-04462**

**DATE: 8/14/2003**

The O S Kelly Co  
Michael Heironimus  
318 E North St  
Springfield, OH 455034230

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  
309 South Fourth Street, Room 222  
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Supervisor  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: USEPA

RAPCA



**Permit To Install  
Terms and Conditions**

**Issue Date: 8/14/2003  
Effective Date: 8/14/2003**

**FINAL PERMIT TO INSTALL 08-04462**

Application Number: 08-04462  
APS Premise Number: 0812100276  
Permit Fee: **\$8275**  
Name of Facility: The O S Kelly Co  
Person to Contact: Michael Heironimus  
Address: 318 E North St  
Springfield, OH 455034230

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

**318 E North St  
Springfield, Ohio**

Description of proposed emissions unit(s):

**Herman line: sand system, pouring, cooling; Westmold pouring, cooling, casting; no bake: sand mixer, reclamation and mold wash; scrap and charge handling; inoculation; epoxy booth.**

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

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

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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 Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

**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 ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

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#### 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>
Particulate Emissions (PE)	38.45
Organic Compounds (OC)	31.86

**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>
F010 - Westmold - Pouring	OAC rule 3745-31-05(A)(3)	5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.
		22.4 lbs/day particulate emissions (PE)
		Adequately enclose and contain fugitive dust to minimize or eliminate visible particulate emissions, to the extent possible with good engineering judgement to maintain compliance with visible emission limitation and daily particulate emission limitation as specified above.
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V permitting	The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(B)	4.09 TPY PE, as a rolling 365 day summation.
	OAC rule 3745-17-08(B)	See B.1.

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Emissions Unit ID: **F010**

The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

The reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust are satisfied through the limitations established by OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

**2.a** None

**B. Operational Restrictions**

1. The maximum annual amount of metal poured in this emissions unit shall not exceed 2,920 tons, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the maximum amount of metal poured, in tons, as specified in the following table:

<u>Month</u>	<u>Maximum Amount of Metal Poured, in tons</u>
1	243.33
1-2	486.66
1-3	729.99
1-4	973.32
1-5	1,216.65
1-6	1,459.98
1-7	1,703.31
1-8	1,946.64
1-9	2,189.97
1-10	2,433.30
1-11	2,676.63
1-12	2,920.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. The maximum amount of metal poured, in tons.
  - b. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative maximum amount of metal poured, in tons, for each calendar day.
  - c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the maximum amount of metal poured, in tons,.
  - d. The calculated, particulate emissions and rolling 365 day summations of particulate emissions for this emission units, in tons.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. The rolling, 365 day limitations as specified in section B.1 of this permit.
  - b. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of metal poured, in tons.
2. The permittee shall submit annual reports which specify the following:
  - a. The total PE emissions, in tons, for this emission unit.
  - b. The actual amount of metal poured, in tons, for this emission unit.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-  
22.4 lbs/day PE

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements as specified in Section C.1.a. The daily amount of metal poured, in tons, shall be multiplied by the emission factor of 2.8 lbs PE /ton metal charged which corresponds to Source Classification Code (SCC) 3-04-003-20 from the Airs Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Pollutants (AIRS), 1990.

- b. Emission Limitation-  
4.09 TPY PE, as a rolling 365 day summation

Applicable Compliance Method-

Compliance shall be determined by summing the daily emission calculations for the calendar year and dividing by 2000 lbs/ton.

- c. Emission Limitation-  
5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

Applicable Compliance Method-

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 22.

## F. Miscellaneous Requirements

1. The terms and conditions in Sections A-F are federally enforceable.

**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>	OAC rule 3745-17-08(B)
F011 - Westmold - Cooling	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V permitting	
	OAC rule 3745-17-07(B)	

Applicable Emissions  
Limitations/Control Measures

5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

11.2 lbs/day particulate emissions (PE)

Adequately enclose and contain fugitive dust to minimize or eliminate visible particulate emissions, to the extent possible with good engineering judgement to maintain compliance with visible emission limitation and daily particulate emission limitation as specified above.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(B), and 3745-17-08(B).

2.04 TPY PE, as a rolling 365 day summation.

See B.1.

The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

The reasonably available control measures to minimize or eliminate

visible particulate emissions of fugitive dust are satisfied through the limitations established by OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

2.a None

**B. Operational Restrictions**

1. The maximum annual amount of metal processed in this emissions unit shall not exceed 2,920 tons, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the maximum amount of metal processed, in tons, as specified in the following table:

<u>Month</u>	<u>Maximum Amount of Metal Processed, in tons</u>
1	243.33
1-2	486.66
1-3	729.99
1-4	973.32
1-5	1,216.65
1-6	1,459.98
1-7	1,703.31
1-8	1,946.64
1-9	2,189.97
1-10	2,433.30
1-11	2,676.63
1-12	2,920.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain daily records of the following information for this emissions unit:
- The amount of metal processed, in tons.
  - During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of metal processed, in tons, for each

calendar day.

- c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the amount of metal processed, in tons.
- d. The calculated, PE emissions and rolling 365 day summations of PE emissions for this emission units, in tons.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. The rolling, 365 day limitations as specified in section B.1 of this permit.
  - b. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of metal processed, in tons.
2. The permittee shall submit annual reports which specify the following:
  - a. The total PE emissions, in tons, for this emission unit.
  - b. The actual amount of metal processed, in tons, for this emission unit.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

#### **E. Testing Requirements**

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation-  
11.2 lbs/day PE  
  
Applicable Compliance Method-  
Compliance shall be based upon the record keeping requirements as specified in Section C.1.a. The daily amount of metal processed, in tons shall be multiplied by the emission factor of 1.4 lbs PE/ton metal charged which corresponds to Source Classification Code (SCC) 3-04-003-25 from the Factor Information Retrieval Data System (FIRE v.6.23).
  - b. Emission Limitation-  
2.04 TPY PE, as a rolling 356 day summation

Applicable Compliance Method-  
Compliance shall be determined by summing the daily emission calculations for the calendar year and dividing by 2000 lbs/ton.

- c. Emission Limitation-  
5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

Applicable Compliance Method-  
Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 22.

**F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.

**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.

Operations, Property, and/or Equipment	<u>Applicable Rules/Requirements</u>	OAC rule 3745-17-08(B)
F012 - Westmold - Knockout	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V Permitting	
	OAC rule 3745-17-07(B)	

Applicable Emissions  
Limitations/Control Measures

5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

25.6 lbs/day particulate emissions (PE)

Adequately enclose and contain fugitive dust to minimize or eliminate visible particulate emissions, to the extent possible with good engineering judgement to maintain compliance with visible emission limitation and daily particulate emission limitation as specified above.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(B), and 3745-17-08(B).

4.67 TPY PE, as a rolling 365 day summation.

See B.1.

The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

The reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust are satisfied through the limitations established by OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

2.a None

**B. Operational Restrictions**

- 1 The maximum annual amount of metal processed in this emissions unit shall not exceed 2,920 tons, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the amount of metal processed, in tons as specified in the following table:

<u>Month</u>	<u>Maximum Amount of Metal Processed, in tons</u>
1	243.33
1-2	486.66
1-3	729.99
1-4	973.32
1-5	1,216.65
1-6	1,459.98
1-7	1,703.31
1-8	1,946.64
1-9	2,189.97
1-10	2,433.30
1-11	2,676.63
1-12	2,920.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. The amount of metal processed, in tons.
  - b. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of metal processed, in tons for each calendar day.
  - c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the amount of metal processed, in tons.
  - d. The calculated, PE emissions and rolling 365 day summations of PE emissions for this emission units, in tons.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. The rolling, 365 day limitations specified in section B.1 of this permit.
  - b. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of metal processed, in tons.
2. The permittee shall submit annual reports which specify the following:
  - a. The total PE emissions, in tons, for this emission unit.
  - b. The actual amount of metal processed, in tons, for this emission unit.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):

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Emissions Unit ID: **F012**

- a. Emission Limitation-  
25.60 lbs/day PE

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements as specified in Section C.1.a. The daily amount of metal processed, in tons, shall be multiplied by the emission factor of 3.2 lb PM/ton metal charged which corresponds to Source Classification Code (SCC) 3-04-003-31(Casting Shakeout.) from FIRE v.6.23

- b. Emission Limitation-  
4.67 TPY PE, as a rolling 365 day summation

Applicable Compliance Method-

Compliance shall be determined by summing the daily emission calculations for the calendar year and dividing by 2000 lbs/ton.

- c. Emission Limitation-  
5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

Applicable Compliance Method-

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 22.

**F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.

## 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>
F013 - Herman - Pouring	OAC rule 3745-31-05(A)(3)	5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.
		28.0 lbs/day particulate emissions (PE)
		Adequately enclose and contain fugitive dust to minimize or eliminate visible particulate emissions, to the extent possible with good engineering judgement to maintain compliance with visible emission limitation and daily particulate emission limitation as specified above.
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V permitting	The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(B)	5.11 TPY PE, as a rolling 365 day summation.
	OAC rule 3745-17-08(B)	See B.1.

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Emissions Unit ID: **F013**

The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

The reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust are satisfied through the limitations established by OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

**2.a** None

**B. Operational Restrictions**

1. The maximum annual amount of metal poured in this emissions unit shall not exceed 3,650 tons, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the maximum amount of metal poured, in tons, as specified in the following table:

<u>Month</u>	<u>Maximum Amount of Metal Poured, in tons</u>
1	304.17
1-2	608.34
1-3	912.51
1-4	1,216.68
1-5	1,520.85
1-6	1,825.02
1-7	2,129.19
1-8	2,433.36
1-9	2,737.53
1-10	3,041.07
1-11	3,345.87
1-12	3,650.00

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**Issued: 8/14/2003**

Emissions Unit ID: **F013**

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. The maximum amount of metal poured, in tons.
  - b. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of metal poured, in tons for each calendar day.
  - c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the amount of metal poured, in tons.
  - d. The calculated, PE emissions and rolling 365 day summations of PE emissions for this emissions units, in tons.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. The rolling, 365 day limitations specified in section B.1 of this permit.
  - b. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of metal poured, in tons.
2. The permittee shall submit annual reports which specify the following:
  - a. The total PE emissions, in tons, for this emission unit.
  - b. The actual amount of metal poured in tons, for this emission unit.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):

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- a. Emission Limitation-  
28.0 lbs/day PE

**Applicable Compliance Method-**

Compliance shall be based upon the record keeping requirements as specified in Section B.1.a. The daily amount of metal poured, in tons shall be multiplied by the emission factor of 2.8 lb PE /ton metal charged which corresponds to Source Classification Code (SCC) 3-04-003-20 from the Airs Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Pollutants (AIRS), 1990.

- b. **Emission Limitation-**  
5.11 TPY PE, as a rolling 365 day summation

**Applicable Compliance Method-**

Compliance shall be determined by summing the daily emission calculations for the calendar year and dividing by 2000 lbs/ton.

- c. **Emission Limitation-**  
5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

**Applicable Compliance Method-**

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 22.

**F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.

**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>
F014 - Herman - Cooling	OAC rule 3745-31-05(A)(3)	5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.
		14.0 lbs/day particulate emissions (PE)
		Adequately enclose and contain fugitive dust to minimize or eliminate visible particulate emissions, to the extent possible with good engineering judgement to maintain compliance with visible emission limitation and daily particulate emission limitation as specified above.
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V Permitting	The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(B)	2.56 TPY PE, as a rolling 365 day summation.
	OAC rule 3745-17-08(B)	See B.1.

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The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

The reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust are satisfied through the limitations established by OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

**2.a** None

**B. Operational Restrictions**

1. The maximum annual amount of metal processed in this emissions unit shall not exceed 3,650 tons, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the maximum amount of metal processed, in tons as specified in the following table:

<u>Month</u>	<u>Maximum Amount of Metal Processed, in tons</u>
1	304.17
1-2	608.34
1-3	912.51
1-4	1,216.68
1-5	1,520.85
1-6	1,825.02
1-7	2,129.19
1-8	2,433.36
1-9	2,737.53
1-10	3,041.07
1-11	3,345.87
1-12	3,650.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. The amount of metal processed, in tons.
  - b. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of metal processed, in tons, for each calendar day.
  - c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the amount of metal processed, in tons.
  - d. The calculated, PE emissions and rolling 365 day summations of PE emissions for this emissions units, in tons.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. The rolling, 365 day limitations specified in section B.1 of this permit.
  - b. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of metal processed, in tons.
2. The permittee shall submit annual reports which specify the following:
  - a. The total PE emissions, in tons, for this emission unit.
  - b. The actual amount of metal processed, in tons, for this emission unit.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-  
14.0 lbs/day PE

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements as specified in Section C.1.a. The daily amount of metal processed, in tons, shall be multiplied by the emission factor of 1.4 lbs PE/ton metal charged which corresponds to Source Classification Code (SCC) 3-04-003-25 from the Factor Information Retrieval Data System (FIRE v.6.23).

- b. Emission Limitation-  
2.56 TPY PE, as a rolling 356 day summation

Applicable Compliance Method-

Compliance shall be determined by summing the daily emission calculations for the calendar year and dividing by 2000 lbs/ton.

- c. Emission Limitation-  
5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

Applicable Compliance Method-

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 22.

**F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.

## 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>
P903 - Herman Line - Sand System with baghouse *Modification	OAC rule 3745-31-05(A)(3)	5% visible emission limitation as a 6 minute average for point source emissions
		5% visible emission limitation as a 3 minute average for fugitive source emissions
		3.4 lbs particulate emissions (PE)/hr
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V permitting	The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(A)(1), and 3745-17-11(B)(1).
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-07(B)(1)	9.15 TPY particulate emissions (PE), as a rolling 365 day summation.
	OAC rule 3745-17-11(B)(1)	See B.1.
		The opacity limitation specified by this rule is less stringent than that established by OAC rule

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3745-31-05(A)(3).

The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

## 2. Additional Terms and Conditions

- 2.a** The 3.40 lbs/hr limitation was established for PTI purposes to reflect the potential to emit for the emission unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

## B. Operational Restrictions

1. The maximum annual amount of sand handled in this emissions unit shall not exceed 292,000 tons of sand handled, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the maximum amount of sand handled, in tons, as specified in the following table:

<u>Month</u>	<u>Maximum Amount of Sand Handled, in tons</u>
1	24,333.33
1-2	48,666.67
1-3	73,000.00
1-4	97,333.33
1-5	121,666.67
1-6	146,000.00
1-7	170,333.33
1-8	194,666.67
1-9	219,000.00
1-10	243,333.33
1-11	267,666.67
1-12	292,000.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

2. The pressure drop across baghouse shall be maintained within the range of 0.5 to 7.0 inches of water while the emissions unit is in operations.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across each baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).
2. The permittee shall record the pressure drop across the baghouse on a daily basis.
3. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. The amount of sand handled, in tons.
  - b. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of sand handled, in tons for each calendar day.
  - c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the amount of sand handled, in tons.
  - d. The calculated, PE emissions and rolling 365 day summations of PE emissions for this emissions unit, in tons.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. All periods of time during which the pressure drop across the cartridges did not comply with the allowable range specified in B.2.
  - b. The rolling, 365 day limitations specified in section B.1 of this permit.

- c. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of sand handled, in tons.
2. The permittee shall submit annual reports which specify the following:
    - a. The total PE emissions, in tons, for this emission unit.
    - b. The actual amount of sand handled, in tons, for this emission unit.  
These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

#### **E. Testing Requirements**

1. Compliance with the specified emission limitations in Section A.1. of this permit shall be demonstrated in accordance with the following methods:
  - a. Emission Limitation -  
3.4 lbs PE/hr  
  
Applicable Compliance Method -  
Compliance shall be determined by summing the following products:
    - i. Return sand conveyor to rotary screen:  
  
The maximum hourly process rate of 54.0 tons sand/hour is multiplied by the emissions factor, 0.0021 lb PE/ton, (AP-42,Chapter 11, Table 11.12-2 (10/01)), resulting in an emission rate of 0.11 lb/hr.
    - ii. Rotary screen:  
  
The maximum hourly process rate of 54.0 tons sand/hour is multiplied by the emission factor, 0.015 lb PE/ton (AP-42,Chapter 11, Table 11.19.2-2 (01/95)), resulting in an emission rate of 0.81 lb/hr.
    - iii. Return sand bucket and sand silo:  
  
The maximum hourly process rate of 54.0 tons/hour is multiplied by the emission factor, 0.24 lb PE/ton (AP-42,Chapter 11, Table 11.12-2 (01/95)). The results are then multiplied by a control factor of 94%, i.e.,(1 - 0.94), resulting in a controlled emission rate of 0.78 lb/hr.

- iv. Return sand conveyor to muller mixer:

The maximum hourly process rate of 54.0 tons sand/hour is multiplied by the emissions factor, 0.0021 lb PE/ton, (AP-42,Chapter 11, Table 11.12-2 (10/01)), resulting in an emission rate of 0.11 lb/hr.

- v. Muller mixer:

The maximum hourly process rate of 54.0 tons/hour is multiplied by the emission factor, 0.022 lb PE/ton (AP-42,Chapter 11, Table 11.12-2 (10/01)). resulting in an emission rate of 1.19 lb/hr.

- vi. Reclaim sand conveyor and reclaim sand silo:

The maximum hourly process rate of 54.0 tons sand/hour is multiplied by the emissions factor, 0.0021 lb PE/ton, (AP-42,Chapter 11, Table 11.12-2 (10/01)), resulting in an emission rate of 0.11 lb/hr.

- iv. Mold machine-

The maximum hourly amount of sand handled of 54.0 tons/hour is multiplied by the emission factor, 0.0055 lb PE/ton (AP-42,Chapter 12, Table 12.10-7 (01/95))., resulting in an emission rate of 0.30 lb/hr.

- b. Emission Limitation-  
 9.15 TPY PE, as a rolling 365 day summation

Applicable Compliance Method-

Compliance shall be determined by summing the daily emission calculations for the calendar year and dividing by 2000 lbs/ton.

- c. Emission Limitation-  
 5% visible emission limitation as a 3 minute average.

Applicable Compliance Method-

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 22.

- d. Emission Limitation-  
 5% visible emission limitation as a 6 minute average.

Applicable Compliance Method-

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Method 9.

**F. Miscellaneous Requirements**

1. The terms and conditions of Sections A-F are federally enforceable.
2. Emissions unit P903 was previously permitted as F015 under PTI #08-3820 issued on 09/16/98. The terms for P903 in this permit represent a modification of PTI 08-03820 and supercede the terms identified in PTI#08-3820 for emission unit F015. This modification represents an increase of 6.25 TPY particulate emissions.

**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>	Synthetic Minor to avoid Title V Permitting
P027 - Palmer No Bake Mold Sand Mixer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G)(2)
	OAC rule 3745-35-07 (B)	

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Applicable Emissions  
Limitations/Control Measures

117.0 lbs. of organic compounds  
 (OC) per day.

The requirements of this rule also  
 include compliance with the  
 requirements of OAC rules  
 3745-35-07(B) and  
 3745-21-07(G)(2).

21.35 tons of OC per year , as a  
 rolling 365 day summation.

This unit is exempt from this rule  
 pursuant to OAC rule  
 3745-21-07(G)(9)(i).

**2. Additional Terms and Conditions**

**2.a** None

**B. Operational Restrictions**

1. The maximum annual amount of sand handled for this emissions unit shall not exceed 36,500.00 tons sand handled, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the usage levels specified in the following table:

<u>Month</u>	<u>Maximum Amount of Sand Handled, in tons</u>
1	3,041.67
1-2	6,083.33
1-3	9,125.01
1-4	12,166.68
1-5	15,208.35

1-6	18,250.02
1-7	21,291.69
1-8	24,333.33
1-9	27,375.03
1-10	30,416.67
1-11	33,458.37
1-12	36,500.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual usage rate limitation shall be based upon a rolling, 365-day.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information for each day for the sand mixing operation:
  - a. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of sand handled, in tons, for each calendar day.
  - b. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of sand handled, in tons.
  - c. The calculated, OC emissions and rolling 365 day summations of OC emissions for this emission unit, in tons.
  
2. The permit to install for this emissions unit was evaluated based on the actual materials (typically sand binder and catalyst 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):

Pollutant: Methylene bisphenyl isocyanate (MDI)

TLV (mg/m<sup>3</sup>): 0.05118

Maximum Hourly Emission Rate (lbs/hr): 0.0154

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1.09

MAGLC (ug/m<sup>3</sup>): 1.22

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 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 sand binder and catalyst 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.).
3. 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.

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 in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. The rolling, 365 day limitations on production as specified in section B.1 of this permit.
  - b. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of sand handled, in tons.
  - b. An identification of each day during which the total organic compound emissions exceeded 117.0 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall also submit annual reports which specify the total organic compound emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

#### E. Testing Requirements

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation-  
117.0 lbs/day OC  
  
 Applicable Compliance Method-  
 Compliance shall be based upon the record keeping requirements as specified in Section C.1. The daily amount of sand handled, in tons shall be multiplied by the emission factor of 1.17 lbs OC/ton sand processed which corresponds to the 1998 EPA and OCMA guidance document.
  - b. Emission Limitation-  
21.35 TPY OC, as a rolling 365-day summation.  
  
 Applicable Compliance Method-  
 Compliance shall be determined by summing the daily emission calculations, as required in

Section C.1, for the calendar year and converting to tons by dividing by 2000 lbs/tons.

**F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.

**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>
P029 - No Bake - Mold Wash	OAC rule 3745-31-05(A)(3)	57.60 lbs OC/day
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V permitting	The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B) and 3745-21-07(G)(2).  10.51 TPY OC , as a rolling 365 day summation.  See B.1.
	OAC rule 3745-21-07(G)(2)	This unit is exempt from this rule pursuant to OAC rule 3745-21-07(G)(9)(i).

**2. Additional Terms and Conditions**

- 2.a** None

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**B. Operational Restrictions**

1. The maximum annual mold wash usage for this emissions unit shall not exceed 14,600 gallons based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the usage levels specified in the following table:

<u>Month</u>	<u>Maximum Allowable Cumulative Usage, in gallons</u>
1	1,216.67
1-2	2,433.34
1-3	3,650.01
1-4	4,866.68
1-5	6,083.35
1-6	7,300.02
1-7	8,516.69
1-8	9,733.36
1-9	10,950.03
1-10	12,166.70
1-11	13,383.37
1-12	14,600.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual usage rate limitation shall be based upon a rolling, 365-day summation.

### **C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative mold wash usage rate for each calendar day, in gallons.
  - b. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the mold wash usage rates, in gallons.
  - c. The calculated, OC emissions and rolling 365 day summations of OC emissions for this emission units, in tons.
  - d. The company identification for the mold wash material employed.
  - e. The number of gallons of the mold wash material employed.
  - f. The organic compound content of the mold wash material, in pounds per gallon.

- g. The total organic compound emission rate for the mold wash materials, in pounds per day.
2. The permit to install for this emissions unit was evaluated based on the actual materials (typically mold wash 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):

Pollutant: Methanol

TLV (mg/m<sup>3</sup>): 262.09

Maximum Hourly Emission Rate (lbs/hr): 3.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 227.9

MAGLC (ug/m<sup>3</sup>): 6,240

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 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 mold wash 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

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- 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.).
3. 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.

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 in accordance with General Term and Condition A.2. which include the following information:
  - a. An identification of each day during which the total organic compound emissions exceeded 57.6 pounds per day, and the actual organic compound emissions for each such day.
  - b. The rolling, 365 day limitations as specified in section B.1 of this permit.
  - c. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative mold wash usage, in gallons.
2. The permittee shall also submit annual reports which specify the total organic compound emissions from this emissions unit, in tons, for the previous calendar year. These reports shall be submitted by January 31 of each year.

#### **E. Testing Requirements**

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in

accordance with the following method(s):

- a. Emission Limitation-  
57.6 lbs/day OC

Applicable Compliance Method-  
Compliance shall be based upon the record keeping as specified in Section C.1.

- b. Emission Limitation-  
10.51 TPY OC, as a rolling 365 day summation.

Applicable Compliance Method-  
Compliance shall be determined by summing the daily emission calculations, as required in Section C.1., for the calendar year and converting to tons by dividing by 2000 lbs/tons.

**F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.

**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>	OAC rule 3745-17-08(B)
P901- Scrap and Charge Handling	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-35-07(B) Synthetic Minor to avoid Title V permitting	
	OAC rule 3745-17-07(B)	

**The O  
PTI A  
Issued: 8/14/2003**

Emissions Unit ID: **P901**

Applicable Emissions  
Limitations/Control Measures

5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

36.0 lbs/day particulate emissions (PE)

Adequately enclose and contain fugitive dust to minimize or eliminate visible particulate emissions, to the extent possible with good engineering judgement to maintain compliance with visible emission limitation and daily particulate emission limitation as specified above.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(B), and 3745-17-08(B).

6.57 TPY PE, as a rolling 365 day summation.

See B.1.

The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).

The reasonably available control

measures to minimize or eliminate visible particulate emissions of fugitive dust are satisfied through the limitations established by OAC rule 3745-31-05(A)(3).

## 2. Additional Terms and Conditions

2.a None

## B. Operational Restrictions

1. The maximum annual amount of metal charged in this emissions unit shall not exceed 21,900 tons, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the specified in the following table:

<u>Month</u>	<u>Maximum Amount of Metal Charged, in tons</u>
1	1,825.00
1-2	3,650.00
1-3	5,475.00
1-4	7,300.00
1-5	9,125.00
1-6	10,950.00
1-7	12,775.00
1-8	14,600.00
1-9	16,425.00
1-10	18,250.00
1-11	20,075.00
1-12	21,900.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

## C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. The amount of metal charged, in tons.
  - b. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of metal charged, in tons for each calendar day.
  - c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the amount of metal charged, in tons.

- d. The calculated, PE emissions from this unit and the rolling 365 day summations of PE emissions for this emission units, in tons.

#### D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports in accordance with general Term and condition A.2. that identify all exceedances of the following:
  - a. The rolling, 365 day limitations as specified in section B.1 of this permit.
  - b. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amounts of metal charged, in tons.
2. The permittee shall submit annual reports which specify the following:
  - a. The total PE emissions, in tons, for this emission unit.
  - b. The actual amount of metal charged, in tons, for this emission unit.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

#### E. Testing Requirements

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation-  
36.0 lbs/day PE  
  
Applicable Compliance Method-  
Compliance shall be based upon the record keeping requirements as specified in Section C.1.a. The daily amount of metal charged, in tons shall be multiplied by the emission factor of 0.60 lb PE /ton metal charged which corresponds to Source Classification Code (SCC) 3-04-003-15 from the Factor Information Retrieval Data System (FIRE v.6.23).
  - b. Emission Limitation-  
6.57 TPY PE, as a rolling 365 day summation  
  
Applicable Compliance Method-

Compliance shall be determined by summing the daily emission calculations for the calendar year, in tons, as described in C.1.d.

- c. Emission Limitation-  
5% visible emission limitation as a 3 minute average, as observed from general ventilation egress points.

Applicable Compliance Method-  
Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 22.

**F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.

## 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>
P902 - No Bake Sand Reclamation System with baghouse	OAC rule 3745-31-05(A)(3)	5% visible emission limitation as a 6 minute average for point source emissions
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V permitting	5% visible emission limitation as a 3 minute average for fugitive emissions
		0.98 lbs particulate emissions (PE)/hr
	4.26 TPY particulate emissions (PE), as a rolling 365 day summation.	
OAC rule 3745-17-07(A)(1)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B), 3745-17-07(A)(1), and 3745-17-11(B)(1).  See B.1.	The opacity limitation specified by this rule is less stringent than that established by OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)(1)		

**2. Additional Terms and Conditions**

- 2.a** The 0.98 lbs/hr limitation was established for PTI purposes to reflect the potential to emit for the emission unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

**B. Operational Restrictions**

1. The maximum annual amount of sand handled for this emissions unit shall not exceed 292,000 tons of sand handled, based upon a rolling, 365-day summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the specified in the following table:

<u>Month</u>	<u>Maximum Amount of Sand Handled, in tons</u>
1	3,650.00
1-2	7,300.00
1-3	10,950.00
1-4	14,600.00
1-5	18,250.00
1-6	21,900.00
1-7	25,550.00
1-8	29,200.00
1-9	32,850.00
1-10	36,500.00
1-11	40,150.00
1-12	43,800.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation shall be based upon a rolling, 365-day summation.

2. The pressure drop across the baghouse shall be maintained within the range of 0.5 to 7.0 inches of water while the emissions unit is in operations.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across

each baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

2. The permittee shall record the pressure drop across the baghouse on a daily basis.
3. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. The amount of sand handled, in tons.
  - b. During the first 365 calendar days of operation following the issuance of this permit, the permittee shall record the cumulative amount of sand handled, in tons for each calendar day.
  - c. Beginning after the first 365 calendar days of operation following the issuance of this permit, the rolling, 365-day summation of the amount of sand handled, in tons.
  - d. The calculated, PE emissions and rolling 365 day summations of PE emissions for this emission units, in tons.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports in accordance with general term and condition A.2. that identify all exceedances of the following:
  - a. All periods of time during which the pressure drop across the cartridges did not comply with the allowable range specified in B.2.
  - b. The rolling, 365 day limitations as specified in section B.1 of this permit.
  - c. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amount of sand handled, in tons.
2. The permittee shall submit annual reports which specify the following:
  - a. The total PE emissions, in tons, for this emission unit.
  - b. The actual amount of sand handled, in tons, for this emission unit.

These reports shall be submitted by January 31 of each year and shall cover the previous

calendar year.

## E. Testing Requirements

1. Compliance with the specified emission limitations in Section A.1. of this permit shall be demonstrated in accordance with the following methods:

- a. Emission Limitation -  
0.98 lbs PE/hr

Applicable Compliance Method -  
Compliance shall be determined by summing the following products:

- i. Sand dump:

The maximum hourly process rate of 5.0 tons sand/hour is multiplied by the emissions factor, 0.0415 lb PE/ton, (AP-42, Section 13.2.4, Equation 1 (10/01)), resulting in an emission rate of 0.208 lb/hr.

- ii. Attrition Mill:

The maximum hourly process rate of 5.0 tons sand/hour is multiplied by the emission factor, 0.015 lb PE/ton (AP-42, Chapter 11, Table 11.19.2-2 (01/95)). The results are then multiplied by a control factor of 97%, i.e., (1 - 0.97), resulting in a controlled emission rate of 0.002 lb/hour.

- iii. Bucket elevator to vibrating screen:

The maximum hourly process rate of 5.0 tons/hour is multiplied by the emission factor, 0.24 lb PE/ton (AP-42, Chapter 11, Table 11.12-2 (01/95)). The results are then multiplied by a control factor of 97%, i.e., (1 - 0.97), resulting in a controlled emission rate of 0.036 lb/hr.

- iv. Vibrating screener:

The maximum hourly process rate of 5.0 tons sand/hour is multiplied by the emissions factor, 0.071 lb PE/ton, (AP-42, Chapter 11, Table 11.19-2-2 (01/95)), resulting in an emission rate of 0.355 lb/hr.

- v. Classifier:

The maximum hourly process rate of 5.0 tons/hour is multiplied by the emission

factor, 2.00 lb PE/ton (AP-42, Chapter 11, Table 19-1-1 (01/95)). The results are then multiplied by a control factor of 97%, i.e.,  $(1 - 0.97)$ , resulting in a controlled emission rate of 0.30 lb/hr.

- vi. Bucket elevator to surge hopper:

The maximum hourly process rate of 5.0 tons sand/hour is multiplied by the emissions factor, 0.24 lb PE/ton, (AP-42, Chapter 11, Table 11.12-2 (01/95)). The results are then multiplied by a control factor of 94%, i.e.,  $(1 - 0.94)$ , resulting in a controlled emission rate of 0.071 lb/hr.

- b. Emission Limitation-  
4.26 TPY PE, as a rolling 365 day summation

Applicable Compliance Method-  
Compliance shall be determined by summing the daily emission calculations for the calendar year and dividing by 2000 lbs/ton.

- c. Emission Limitation -  
5% visible emission limitation as a 6 minute average for point source emissions.

Applicable Compliance Method -  
Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Reference Method 9.

- d. Emission Limitation -  
5% visible emission limitation as a 3 minute average for fugitive source emissions.

Applicable Compliance Method -  
Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

## **F. Miscellaneous Requirements**

1. The terms and conditions in Sections A-F are federally enforceable.