

**Synthetic Minor Determination and/or**  **Netting Determination**  
Permit To Install **13-04538**

**A. Source Description**

Foseco Metallurgical is a large facility that produces powdered fluxes and other exothermic products. This particular permit was processed in order to obtain status as a Synthetic Minor and for all of the emissions units at the facility to avoid MACT (Subpart SSSSS).

**B. Facility Emissions and Attainment Status**

The facility's current potential-to-emit (PTE) for PE is calculated at 57.58 tons/year and 32.89 tons/year for PM<sub>10</sub>. The facility's PTE for OC is calculated at 62.65. The current facility PTE for a single HAP (formaldehyde or phenol) is calculated at 11.83 tons/year. The facility's PTE for combined HAPs is calculated at 24.0 tpy. Cuyahoga County has been designated as non-attainment for ozone.

**C. Source Emissions**

PTI allowables for PE and PM<sub>10</sub> emissions have set at PTE. Total OC allowable emissions have been restricted to 25.65 tons/year due to the restriction placed on HAP and air toxic emissions. The facility has been restricted to HAP emissions below 9.0 tons/year for any single HAP and 24.0 tons/year for any combination of HAPs to avoid MACT and Title V implications. These HAP restrictions are for the total facility HAP emissions.

**D. Conclusion**

Facility controlled potential-to-emit and allowable emissions are below the Title V thresholds. This permit will restrict facility-wide HAPs to less than 9.0 tons/year for any single HAP and 24.0 tons/year for any combination of HAPs. Due to these restrictions, Title V and MACT Subpart SSSSS will not apply to this facility as the facility will be kept below the major source thresholds.

**PUBLIC NOTICE    PUBLIC HEARING  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
ISSUANCE OF DRAFT PERMIT TO INSTALL TO  
FOSECO METALLURGICAL, INC.**

Public notice is hereby given that the Ohio Environmental Protection Agency (EPA) has issued, on February 16, 2006, draft action of Permit-to-Install (PTI) application number 13-04538 to Foseco Metallurgical, Inc., in Cleveland, Ohio. The draft permit proposes to modify several current facility permits in order to restrict the emissions of hazardous air pollutants at the facility located at 20200 Sheldon Road, Cleveland, Ohio, 44142.

A public hearing on the draft air permit will be held on Wednesday, March 22, 2006 at the Brook Park Public Library, 6155 Engle Road, Brook Park, Ohio 44142. The public hearing will commence at 6:30 p.m. to accept comments on the draft permit. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

All interested persons are entitled to attend or be represented and give written or oral comments on the draft permits at the hearing. Written comments on the draft permit must be received by the close of business on Tuesday, March 28, 2006. Comments received after this date will not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to: David Hearne, Division of Air Quality, City of Cleveland, 1925 Saint Clair Avenue, Cleveland, Ohio 44114.

Copies of the draft permit application and technical support information may be reviewed and/or copies made by first calling to make an appointment at the Division of Air Quality, City of Cleveland, located at the above address, telephone number (216) 664-2324.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
CUYAHOGA COUNTY**

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:  
Lazarus Gov.  
Center

**Application No:** 13-04538

**Fac ID:** 1318126134

**DATE:** 2/16/2006

Foseco Metallurgical, Incorporated  
Kevin Leone  
20200 Sheldon Road  
Cleveland, OH 44142

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$2400** will be due. Please do not submit any payment now.

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. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

CLAA

PA



**Permit To Install  
Terms and Conditions**

**Issue Date: To be entered upon final issuance  
Effective Date: To be entered upon final issuance**

**DRAFT PERMIT TO INSTALL 13-04538**

Application Number: 13-04538  
Facility ID: 1318126134  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Foseco Metallurgical, Incorporated  
Person to Contact: Kevin Leone  
Address: 20200 Sheldon Road  
Cleveland, OH 44142

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**20200 Sheldon Road  
Cleveland, Ohio**

Description of proposed emissions unit(s):  
**Synthetic Minor PTI modification to restrict emissions for MACT -- P013, P014, P016-P018, P032, P048, P050, P057, and P059-P061.**

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

**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,

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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

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Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources 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**

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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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PTI A

Emissions Unit ID: P013

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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>
PE	57.6
PM <sub>10</sub>	32.89
OC	25.65
Formaldehyde	6.06
Phenol	6.06
NO <sub>x</sub> from combustion	16.33
CO from combustion	13.63
PE/PM <sub>10</sub> from combustion	1.27
Single HAP	9.0
Combined HAP	24.0

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PTI A

Emissions Unit ID: P013

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**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>
P013 - Oven No. 5 (consisting of a mixer, forming machine, 6.0 mmBtu/hour natural gas-fired oven, tray cleaner and dust collectors)	OAC rule 3745-31-05(A)(3)
This PTI supercedes PTI 13-03085 issued on 09/25/1996.	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11
	OAC rule 3745-21-07(G)(2)
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and

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Title V

Applicable Emissions Limitations/Control Measures	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), 3745-21-07(G)(2), and 3745-31-05(C).
Particulate emissions (PE) shall not exceed 0.76 pound per hour and 3.33 tons per year.	See Sections A.2.c and A.2.d below.
PM <sub>10</sub> emissions shall not exceed 0.76 pound per hour and 3.33 tons per year.	Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
Organic compound (OC) emissions shall not exceed 1.53 pounds per hour and 4.32 tons per year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Formaldehyde emissions shall not exceed 0.25 pound per hour and 0.71 ton per year.	Use of non-photochemically reactive materials. See Section B.5 below.
Phenol emissions shall not exceed 0.25 pound per hour and 0.71 ton per year.	See Section A.2.a below.
Nitrogen Dioxide (NO <sub>x</sub> ) emissions shall not exceed 0.59 pound per hour and 2.58 tons per year from the combustion of natural gas.	
Carbon Monoxide (CO) emissions shall not exceed 0.49 pound per hour and 2.15 tons per year from the combustion of natural gas.	
PE/PM <sub>10</sub> emissions shall not exceed 0.05 pound per hour and 0.22 ton per year from the combustion of natural gas.	

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in Section A.2.b below) shall not exceed 9.0 tons/year for any individual HAP or 24.0 tons/year for a combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.b** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.
- 2.c** The short-term (lb/hour) and annual (tpy) emissions limitations for particulate, PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.
- 2.d** The short-term (lb/hour) emissions limitations for OC, formaldehyde, and phenol emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

**B. Operational Restrictions**

- 1. The maximum annual amount of resin, with a formaldehyde and/or phenol content of no more than 0.37 percent by weight, usage for this emissions unit shall not exceed 384,000 pounds.
- 2. The permittee shall operate the dust collectors (DSC-229 and DSC-1695) whenever this emissions unit is in operation.
- 3. The pressure drop across each dust collector shall be maintained within the range of 0.3 - 2.0 inches of water while the emissions unit is in operation.
- 4. The permittee shall not employ any photochemically reactive materials in this emissions unit.
- 5. The permittee shall only burn natural gas as fuel in this emissions unit.

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

- 1. The permittee shall maintain daily records that document any time periods when the

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dust collectors were not in service while the emissions unit was in operation.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collectors (DSC-229 and DSC-1569) 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). The permittee shall record the pressure drop across the dust collectors on a daily basis.
3. The permittee shall collect and record the following information each month for this emissions unit:
  - a. the company identification for each material employed (e.g., resin-coated sand and any liquids) and whether or not the material is a photochemically reactive material;
  - b. the resin material usage for each month, in pounds;
  - c. the maximum formaldehyde and phenol content of the resin, in percent by weight;
  - d. the OC content of each resin, in pounds OC per pound of material, as applied; and
  - e. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the resin material usage figures.

[Note: The material information must be for the materials as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).]

4. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;

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- e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];
  - f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
  - g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
  - h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.
- \* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.
5. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on resin usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative resin usage levels. These reports shall be submitted in accordance with the reporting requirements

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specified in Part I - General Terms and Conditions, Section A of this permit.

3. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any resin with a formaldehyde and/or phenol content greater than 0.37 percent by weight. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
4. The permittee shall notify the Cleveland DAQ in writing of any record showing that any dust collector (DSC-229 or DSC-1695) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
5. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all period of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
6. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
7. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

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

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
20% opacity, as a 6-minute average, except as provided by rule  
  
Applicable Compliance Method:  
If required by the Ohio EPA or Cleveland DAQ, 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 U.S. EPA Reference Method 9.
  - b. Emission Limitation:  
0.76 pound per hour of PE (from dust collectors DSC-229 and DSC-1695 and oven vents)  
  
Applicable Compliance Method:  
Compliance with the mass emissions limitation shall be determined by using the

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following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.76 \text{ lb/hr}$$

where:

Max = 0.85 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM}} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\*  $7.01 \text{ lb/ton} = 7 \text{ lb/ton}$  from AP-42 (Table 10.2-1 for pulping) +  $0.01 \text{ lb/ton}$  from engineering judgement (for tray cleaning)

If required by the Ohio EPA or Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:  
3.33 tons per year of PE (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation:  
0.76 pound per hour of  $\text{PM}_{10}$  emissions (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM-10}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM-10}}] = 0.76 \text{ lb/hr}$$

where:

Max = 0.85 ton/hr = maximum hourly throughput

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$EF_{PM-10} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

Oven<sub>PM-10</sub> = 0.82 lb/ton (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

If required by the Ohio EPA or Cleveland DAQ, compliance with the allowable PM<sub>10</sub> emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable.

- e. Emission Limitation:  
 3.33 tons per year of PM<sub>10</sub> emissions (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
 1.53 pounds of OC per hour (total from oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$E = RU \times EF$$

E = maximum hourly OC emissions

RU = 68.0 lbs/hour maximum resin usage

EF = 0.0225 lb OC/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25, or an alternative method approved by Ohio EPA.

- g. Emission Limitation:  
 4.32 tons per year of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

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$$E = RU \times EF$$

E = annual OC emissions

RU = annual resin usage from records (see Section C.3.e)

EF = OC content, 0.0225 lb OC/lb resin employed

- h. Emission Limitation:  
0.25 pounds per hour of formaldehyde emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_F = 0.25 \text{ lb/hr}$$

RU = 68.0 lbs/hr = maximum hourly resin usage

EF<sub>F</sub> = 0.0037 lb formaldehyde/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 63, Appendix A, Method 420, or an alternative method approved by Ohio EPA.

- i. Emission Limitation:  
0.71 ton per year of formaldehyde emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_F$$

E = annual formaldehyde emissions

RU = annual resin usage from records (see Section C.3.e)

EF<sub>F</sub> = 0.0037 lb formaldehyde/lb resin employed

- j. Emission Limitation:  
0.25 pound per hour of phenol emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

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$$RU \times EF_P = 0.25 \text{ lb/hr}$$

RU = 68.0 lbs/hr = maximum hourly resin usage

$EF_P = 0.0037 \text{ lb phenol/lb resin employed}$

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with U.S. EPA Air Toxic Test Method TO-4a, or an alternative method approved by Ohio EPA.

- k. Emission Limitation:  
0.71 ton per year of phenol emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_P$$

E = annual phenol emissions

RU = annual resin usage from records (see Section C.3.e)

$EF_P = 0.0037 \text{ lb phenol/lb resin employed}$

- l. Emission Limitation:  
9.0 tons individual HAPs/year for the list of emissions units in Section A.2.b, as a 12-month, rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

- m. Emission Limitation:  
24.0 tons combined HAPs/year for the list of emissions units in Section A.2.b, as a 12-month, rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

- n. Emission Limitation:  
0.58 pound per hour of NO<sub>x</sub> emissions from the combustion of natural gas

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**Applicable Compliance Method:**

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.0) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or an alternative method approved by Ohio EPA.

- o. **Emission Limitation:**  
2.54 tons per year of NOx emissions from the combustion of natural gas

**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- p. **Emission Limitation:**  
0.49 pound per hour of CO emissions from the combustion of natural gas

**Applicable Compliance Method:**

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.082) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.0) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or an alternative method approved by Ohio EPA.

- q. **Emission Limitation:**  
2.15 ton per year of CO emissions from the combustion of natural gas

**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by

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2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- r. Emission Limitation:  
0.05 pound per hour of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.0) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A (Total PE are equivalent to total PM<sub>10</sub> emissions).

- s. Emission Limitation:  
0.22 ton per year of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

**F. Miscellaneous Requirements**

1. The permittee shall conduct, or have conducted, a detailed pollution prevention project to determine the technical and economic feasibility of reducing OC emissions from the sources at the facility. The detailed pollution prevention project shall research and determine the technical and economic feasibility of converting the current binders and release agents to lower emitting materials. This project shall include, at the minimum, the following steps:
  - a. Researching the availability of lower emitting acceptable binders, resins and release agents.

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- b. Determining if lower emitting materials can be economically developed.
- c. Conducting trials of available materials to determine if the use of the materials are technically feasible, and to determine if the use of the materials is economically reasonable.

The work on the pollution prevention project shall continue for at least three years.

The permittee shall submit an annual report and supporting information that describes the work performed and the results obtained from the above described project during the most recent year. This report shall be submitted to the Cleveland DAQ.

- 2. The following terms and conditions are federally enforceable: A. - E.

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**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>
P014 - Cone Blender No. 4 with three dust collectors  This PTI supercedes PTI 13-03463 issued on 09/29/1999.	OAC rule 3745-31-05(A)(3)          OAC rule 3745-17-07(A)          OAC rule 3745-17-11	Particulate emissions (PE) shall not exceed 2.76 pounds per hour and 12.09 tons per year.          PM <sub>10</sub> emissions shall not exceed 0.96 pounds per hour and 4.20 tons per year.  See Section A.2.a below.  Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.  The emission limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The short-term (lb/hour) and annual (tpy) emissions limitations for particulate and PM<sub>10</sub> emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

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**Issued: To be entered upon final issuance****B. Operational Restrictions**

1. The permittee shall operate the dust collectors (DSC-521, DSC-139 and BVF-976) whenever this emissions unit is in operation.
2. The pressure drop across each of the dust collectors shall be maintained within the following ranges while the emissions unit is in operation:  
DSC-521: 0.2 - 6.0 inches of water  
DSC-139: 1.0 - 6.0 inches of water  
BVF-976: 1.0 - 6.0 inches of water

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the emissions unit was in operation.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across each of the dust collectors (DSC-521, DSC-139 and BVF-976) 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). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.

**D. Reporting Requirements**

1. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any record showing that any dust collector (DSC-521, DSC-139, or BVF-976) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

**E. Testing Requirements**

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

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a. Emission Limitation:

20% opacity from stack, as a 6-minute average, except as provided by rule.

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Applicable Compliance Method:

If required by the Ohio EPA or Cleveland DAQ, 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 U.S. EPA Reference Method 9.

b. Emission Limitation:

2.76 pound per hour of PE (total from dust collectors DSC-521, DSC-139 and BVF-976)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 2.76 \text{ lb/hr}$$

where:

Max = 1.0 ton/hr = maximum hourly throughput

EF = 276.2 lb/ton\*

CE = 99% = control efficiency of each dust collector

\* 276.2 lb/ton = 2 x 120 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling) + 2.2 lb/ton from AP-42 (Table 11.12-2 for the blow pot)

If required by the Ohio EPA or Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

12.09 tons per year of PE (total from dust collectors DSC-521, DSC-139 and BVF-976)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

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- d. Emission Limitation:  
0.96 pound per hour of PM<sub>10</sub> emissions (total from dust collectors DSC-521,  
DSC-139 and BVF-976)

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Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 0.96 \text{ lb/hr}$$

where:

Max = 1.0 ton/hr = maximum hourly throughput

EF = 96.2 lb/ton\*

CE = 99% = control efficiency of each dust collector

\* 96.2 lb/ton = 2 x 30 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling) + 2.2 lb/ton from AP-42 (Table 11.12-2 for the blow pot)

If required by the Ohio EPA or Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable, of 40 CFR Part 60, Appendix A..

- e. Emission Limitation:  
4.20 tons per year of PM<sub>10</sub> emissions (total from dust collectors DSC-521, DSC-139 and BVF-976)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

## F. Miscellaneous Requirements

none

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**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>
P016 - Cone Blender No. 1 with dust collector	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 1.16 pounds per hour and 5.08 tons per year.
	OAC rule 3745-17-07(A)	PM <sub>10</sub> emissions shall not exceed 0.48 pounds per hour and 2.10 tons per year.
	OAC rule 3745-17-11	See Section A.2.a below.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V	Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
		The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
		See Section A.2.b below.

**2. Additional Terms and Conditions**

- 2.a The short-term (lb/hour) and annual (tpy) emissions limitations for particulate and PM<sub>10</sub> emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emission

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limitations.

- 2.b** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in Section A.2.b below) shall not exceed 9.0 tons/year for any individual HAP or 24.0 tons/year for a combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.c** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.

**B. Operational Restrictions**

1. The permittee shall operate the dust collector (DSC-517) whenever this emissions unit is in operation.
2. The pressure drop across the dust collector shall be maintained within the range of 1.0 - 6.0 inches of water while the emissions unit is in operation.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the dust collector was not in service while the emissions unit was in operation.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collector (DSC-517) 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). The permittee shall record the pressure drop across the dust collector on a daily basis.
3. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;
  - e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];

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- f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
- g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.

**D. Reporting Requirements**

1. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any record showing that the dust collector (DSC-517) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

**E. Testing Requirements**

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

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- a. Emission Limitation:

20% opacity from stack, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required by the Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.

- b. Emission Limitation:

1.16 pound per hour of PE (from dust collector DSC-517)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 1.16 \text{ lb/hr}$$

where:

Max = 0.75 ton/hr = maximum hourly throughput

EF = 154.0 lb/ton\*

CE = 99% = control efficiency of the dust collector

\* 154.0 lb/ton = 120 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:

5.08 tons per year of PE (from dust collector DSC-517)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly

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

- d. Emission Limitation:  
0.48 pound per hour of PM<sub>10</sub> emissions (from dust collectors DSC-517)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 0.48 \text{ lb/hr}$$

where:

Max = 0.75 ton/hr = maximum hourly throughput

EF = 64.0 lb/ton\*

CE = 99% = control efficiency of the dust collector

\* 64.0 lb/ton = 30 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable,

- e. Emission Limitation:  
2.10 tons per year of PM<sub>10</sub> emissions (from dust collectors DSC-517)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
9.0 tons individual HAPs/year for the list of emissions units in Section A.2.c, as a 12-month, rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.3.

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- g. Emission Limitation:  
24.0 tons combined HAPs/year for the list of emissions units in Section A.2.c, as a 12-month, rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.3.

## **F. Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").
2. The following terms and conditions are federally enforceable: A. - E.

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**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>
P017 - Cone Blender No. 2 with dust collector	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 2.70 pounds per hour and 11.83 tons per year.
This PTI supercedes PTI 13-899 issued on 04/13/1982.	OAC rule 3745-17-07(A)	PM <sub>10</sub> emissions shall not exceed 1.12 pounds per hour and 4.91 tons per year.
	OAC rule 3745-17-11	See Section A.2.a below. Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
		See Section A.2.b below.

**2. Additional Terms and Conditions**

- 2.a The short-term (lb/hour) and annual (tpy) emissions limitations for particulate and PM<sub>10</sub> emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions

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limitations.

**2.b** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in Section A.2.b below) shall not exceed 9.0 tons/year for any individual HAP or 24.0 tons/year for a combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.

**2.c** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.

**B. Operational Restrictions**

1. The permittee shall operate the dust collector (DSC-518) whenever this emissions unit is in operation.
2. The pressure drop across the dust collector shall be maintained within the range of 1.0 - 6.0 inches of water while the emissions unit is in operation.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the dust collector was not in service while the emissions unit was in operation.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collector (DSC-518) 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). The permittee shall record the pressure drop across the dust collector on a daily basis.
3. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];

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- d. the number of pounds of each HAP containing material employed;
- e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];
- f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
- g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.

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

1. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any record showing that the dust collector (DSC-518) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

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

**Fosec**

**PTI A**

Emissions Unit ID: P017

**Issued: To be entered upon final issuance**

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

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Emissions Unit ID: P017

**Issued: To be entered upon final issuance**

- a. Emission Limitation:  
20% opacity from stack, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required by Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.

- b. Emission Limitation:  
2.70 pound per hour of PE (from dust collector DSC-518)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 2.70 \text{ lb/hr}$$

where:

Max = 1.75 ton/hr = maximum hourly throughput

EF = 154.0 lb/ton\*

CE = 99% = control efficiency of the dust collector

\* 154.0 lb/ton = 120 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:  
11.83 tons per year of PE (from dust collector DSC-518)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

Emissions Unit ID: P017

- d. Emission Limitation:  
 1.12 pound per hour of PM<sub>10</sub> emissions (from dust collectors DSC-518)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 0.48 \text{ lb/hr}$$

where:

Max = 1.75 ton/hr = maximum hourly throughput

EF = 64.0 lb/ton\*

CE = 99% = control efficiency of the dust collector

\* 64.0 lb/ton = 30 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202 as applicable, of 40 CFR Part 60, Appendix A.

- e. Emission Limitation:  
 4.91 tons per year of PM<sub>10</sub> emissions (from dust collectors DSC-518)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
 9.0 tons individual HAPs/year for the list of emissions units in Section A.2.c, as a 12-month, rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.3.

- g. Emission Limitation:  
 24.0 tons combined HAPs/year for the list of emissions units in Section A.2.c, as a 12-month, rolling summation.

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Emissions Unit ID: P017

**Issued: To be entered upon final issuance**

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.3.

**F. Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").
2. The following terms and conditions are federally enforceable: A. - E.

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Emissions Unit ID: P018

Issued: To be entered upon final issuance

**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>
P018 - Cone Blender No. 3 with dust collector	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 2.70 pounds per hour and 11.83 tons per year.
	OAC rule 3745-17-07(A)	PM <sub>10</sub> emissions shall not exceed 1.12 pounds per hour and 4.91 tons per year.
	OAC rule 3745-17-11	See Section A.2.a below.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V	Visible emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
		The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
		See Section A.2.b below.

**2. Additional Terms and Conditions**

- 2.a The short-term (lb/hour) and annual (tpy) emissions limitations for particulate and PM<sub>10</sub> emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

Emissions Unit ID: P018

- 2.b** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in Section A.2.b below) shall not exceed 9.0 tons/year for any individual HAP or 24.0 tons/year for a combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.c** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.

**B. Operational Restrictions**

1. The permittee shall operate the dust collector (DSC-519) whenever this emissions unit is in operation.
2. The pressure drop across the dust collector shall be maintained within the range of 1.0 - 6.0 inches of water while the emissions unit is in operation.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the dust collector was not in service while the emissions unit was in operation.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collector (DSC-519) 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). The permittee shall record the pressure drop across the dust collector on a daily basis.
3. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;
  - e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];
  - f. the total combined HAP emissions from all HAP containing materials, in pounds

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or tons per month [the sum of (c) times (d) for each material];

- g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.

**D. Reporting Requirements**

1. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any record showing that the dust collector (DSC-519) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

**E. Testing Requirements**

**Foseco Metallurgical, Incorporated**  
**PTI Application: 13-04528**  
**Issue:**

**Facility ID: 1318126134**

Emissions Unit ID: P018

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

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- a. Emission Limitation:  
20% opacity from stack, as a 6-minute average, except as provided by rule.

## Applicable Compliance Method:

If required by the Ohio EPA or the Cleveland Division of Air Quality, 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 U.S. EPA Reference Method 9.

- b. Emission Limitation:  
2.70 pound per hour of PE (from dust collector DSC-519)

## Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 2.70 \text{ lbs/hr}$$

where:

Max = 1.75 ton/hr = maximum hourly throughput

EF = 154.0 lb/ton\*

CE = 99% = control efficiency of the dust collector

\* 154.0 lb/ton = 120 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:  
11.83 tons per year of PE (from dust collector DSC-519)

## Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

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- d. Emission Limitation:  
1.12 pound per hour of PM<sub>10</sub> emissions (from dust collectors DSC-519)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 1.12 \text{ lb/hr}$$

where:

Max = 1.75 ton/hr = maximum hourly throughput

EF = 64.0 lb/ton\*

CE = 99% = control efficiency of the dust collector

\* 64.0 lb/ton = 30 lb/ton from AP-42 (Table 11.5-2 for dry mixing) + 34 lb/ton from SCC 3-05-003-03 (for drum filling)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202 as applicable, of 40 CFR Part 60, Appendix A.

- e. Emission Limitation:  
4.91 tons per year of PM<sub>10</sub> emissions (from dust collectors DSC-519)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
9.0 tons individual HAPs/year for the list of emissions units in Section A.2.c, as a 12-month, rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.3.

- g. Emission Limitation:

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24.0 tons combined HAPs/year for the list of emissions units in Section A.2.c, as a 12-month, rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.3.

**F. Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").
2. The following terms and conditions are federally enforceable: A. - E.

**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>
P032 - Oven No. 9 (consisting of a mixer, forming machine, 6.5 mmBtu/hour natural gas-fired oven, tray cleaner and dust collectors)	OAC rule 3745-31-05(A)(3)
This PTI supercedes PTI 13-03353 issued on 03/25/1998.	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11
	OAC rule 3745-21-07(G)(2)
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V

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<u>Applicable Emissions Limitations/Control Measures</u>	
Particulate emissions (PE) shall not exceed 0.53 pound per hour and 2.32 tons per year.	year from the combustion of natural gas.
PM <sub>10</sub> emissions shall not exceed 0.53 pound per hour and 2.32 tons per year.	PE/PM <sub>10</sub> emissions shall not exceed 0.05 pound per hour and 0.22 ton per year from the combustion of natural gas.
Organic compound (OC) emissions shall not exceed 3.20 pounds per hour and 6.32 tons per year.	The requirements of this rule also include compliance with the requirements of OAC rules 3724-17-07(A), 3745-21-07(G)(2), and 3745-31-05(C).
Formaldehyde emissions shall not exceed 0.53 pound per hour and 1.04 tons per year.	See Section A.2.c and A.2.d below.
Phenol emissions shall not exceed 0.53 pound per hour and 1.04 tons per year.	Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
Nitrogen Dioxide (NO <sub>x</sub> ) emissions shall not exceed 0.64 pound per hour and 2.80 tons per year from the combustion of natural gas.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Carbon Monoxide (CO) emissions shall not exceed 0.53 pound per hour and 2.32 tons per	Use of non-photochemically reactive materials. See Section B.4 below.
	See Sections A.2.a. below.

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**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility shall not exceed 9.0 tons/year for any individual HAP and 24.0 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.b** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.
- 2.c** The short-term (lb/hour) and annual (tpy) emissions limitations for particulate, PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.
- 2.d** The short-term (lb/hour) emissions limitation for OC, formaldehyde, and phenol emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

**B. Operational Restrictions**

- 1. The maximum annual amount of resin, with a formaldehyde and/or phenol content of no more than 0.37 percent by weight, usage for this emissions unit shall not exceed 562,200 pounds.
- 2. The permittee shall operate the dust collectors (DSC-965 and DSC-1734) whenever this emissions unit is in operation.
- 3. The pressure drop across each dust collector shall be maintained within the range of 0.05 - 0.5 inches of water while the emissions unit is in operation.
- 4. The permittee shall not employ any photochemically reactive materials in this emissions unit.
- 5. The permittee shall only burn natural gas as fuel in this emissions unit.

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

- 1. The permittee shall maintain daily records that document any time periods when the

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dust collectors were not in service while the emissions unit was in operation.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collectors (DSC-965 and DSC-1734) 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). The permittee shall record the pressure drop across the dust collectors on a daily basis.
3. The permittee shall collect and record the following information each month for this emissions unit:
  - a. the company identification for each material employed (e.g., resin-coated sand and any liquids) and whether or not the material is a photochemically reactive material;
  - b. the resin material usage for each month, in pounds;
  - c. the maximum formaldehyde and phenol content of the resin, in percent by weight;
  - d. the OC content of each resin, in pounds OC per pound of material, as applied; and
  - e. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the resin material usage figures.

[Note: The material information must be for the materials as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).]

4. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;

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- e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];
  - f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
  - g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
  - h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.
- \* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.
5. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on resin usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative resin usage levels. These reports shall be submitted in accordance with the reporting requirements

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specified in Part I - General Terms and Conditions, Section A of this permit.

3. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any resin with a formaldehyde and/or phenol content greater than 0.37 percent by weight. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
4. The permittee shall notify the Cleveland DAQ in writing of any record showing that any dust collector (DSC-965 or DSC-1734) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
5. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all period of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
6. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
7. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

## **E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
20% opacity, as a 6-minute average, except as provided by rule  
  
Applicable Compliance Method:  
If required by the Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.
  - b. Emission Limitation:  
0.53 pound per hour of PE (from dust collectors DSC-965 and DSC-1734 and oven vents)  
  
Applicable Compliance Method:  
Compliance with the mass emissions limitation shall be determined by using the

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following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.53 \text{ lb/hr}$$

where:

Max = 0.6 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM}} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\*  $7.01 \text{ lb/ton} = 7 \text{ lb/ton}$  from AP-42 (Table 10.2-1 for pulping) +  $0.01 \text{ lb/ton}$  from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

2.32 tons per year of PE (from dust collectors DSC-965 and DSC-1734 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Emission Limitation:

0.53 pound per hour of  $\text{PM}_{10}$  emissions (from dust collectors DSC-965 and DSC-1734 and oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM-10}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM-10}}] = 0.53 \text{ lb/hr}$$

where:

Max = 0.6 ton/hr = maximum hourly throughput

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$EF_{PM-10} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

Oven<sub>PM-10</sub> = 0.82 lb/ton (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable, of 40 CFR Part 60, Appendix A.

- e. Emission Limitation:  
 2.32 tons per year of PM<sub>10</sub> emissions (from dust collectors DSC-965 and DSC-1734 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
 3.20 pounds per hour of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$E = RU \times EF$$

E = maximum hourly OC emissions

RU = 142.4 lbs/hour maximum resin usage

EF = 0.0225 lb OC/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25, or an alternative method approved by Ohio EPA.

- g. Emission Limitation:  
 6.32 tons per year of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

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$$E = RU \times EF$$

E = annual OC emissions

RU = annual resin usage from records (see Section C.3.e)

EF = OC content, 0.0225 lb OC/lb resin employed

- h. Emission Limitation:  
0.53 pounds per hour of formaldehyde emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_F = 0.53 \text{ lb/hr}$$

RU = 142.4 lbs/hr = maximum hourly resin usage

EF<sub>F</sub> = 0.0037 lb formaldehyde/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 63, Appendix A, Method 420, or an alternative method approved by Ohio EPA.

- i. Emission Limitation:  
1.04 tons per year of formaldehyde emissions

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Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_F$$

E = annual formaldehyde emissions

RU = annual resin usage from records (see Section C.3.e)

EF<sub>F</sub> = 0.0037 lb formaldehyde/lb resin employed

- j. Emission Limitation:  
0.53 pound per hour of phenol emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_P = 0.53 \text{ lb/hr}$$

RU = 142.4 lbs/hr = maximum hourly resin usage

EF<sub>P</sub> = 0.0037 lb phenol/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with U.S. EPA Air Toxic Test Method TO-4a, or an alternative method approved by Ohio EPA.

- k. Emission Limitation:  
1.04 tons per year of phenol emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_P$$

E = annual phenol emissions

RU = annual resin usage from records (see Section C.3.e)

EF<sub>P</sub> = 0.0037 lb phenol/lb resin employed

- l. Emission Limitation:

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9.0 tons individual HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

m. Emission Limitation:

24.0 tons combined HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

n. Emission Limitation:

0.64 pound per hour of NO<sub>x</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.5) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or an alternative method approved by Ohio EPA.

o. Emission Limitation:

2.80 tons per year of NO<sub>x</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

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- p. Emission Limitation:  
0.53 pound per hour of CO emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.082) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.5) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or an alternative method approved by Ohio EPA.

- q. Emission Limitation:  
2.32 tons per year of CO emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- r. Emission Limitation:  
0.05 pound per hour of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.5) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A (Total PE are equivalent to total PM<sub>10</sub> emissions).

- s. Emission Limitation:  
0.22 ton per year of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation

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by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

**F. Miscellaneous Requirements**

1. The permittee shall conduct, or have conducted, a detailed pollution prevention project to determine the technical and economic feasibility of reducing OC emissions from the sources at the facility. The detailed pollution prevention project shall research and determine the technical and economic feasibility of converting the current binders and release agents to lower emitting materials. This project shall include, at the minimum, the following steps:
  - a. Researching the availability of lower emitting acceptable binders, resins and release agents.
  - b. Determining if lower emitting materials can be economically developed.
  - c. Conducting trials of available materials to determine if the use of the materials are technically feasible, and to determine if the use of the materials is economically reasonable.

The work on the pollution prevention project shall continue for at least three years.

The permittee shall submit an annual report and supporting information that describes the work performed and the results obtained from the above described project during the most recent year. This report shall be submitted to the Cleveland DAQ.

2. The following terms and conditions are federally enforceable: A. - E.

Foseco Metallurgical, Incorporated  
 PTI Application: 13-04528  
 Issue

Facility ID: 1318126134

Emissions Unit ID: P048

## 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>
P048 - Oven No. 10 (consisting of a mixer, forming machine, 7.16 mmBtu/hour natural gas-fired oven, tray cleaner and dust collectors)	OAC rule 3745-31-05(A)(3)
This PTI supercedes PTI 13-02685 issued on 01/12/1994.	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11
	OAC rule 3745-21-07(G)(2)
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V

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<u>Applicable Emissions Limitations/Control Measures</u>	
Particulate emissions (PE) shall not exceed 0.76 pound per hour and 3.33 tons per year.	year from the combustion of natural gas.  PE/PM <sub>10</sub> emissions shall not exceed 0.05 pound per hour and 0.22 ton per year from the combustion of natural gas.
PM <sub>10</sub> emissions shall not exceed 0.76 pound per hour and 3.33 tons per year.	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(2), and 3745-31-05(C).
Organic compound (OC) emissions shall not exceed 4.91 pounds per hour and 10.91 tons per year.	See Sections A.2.c and A.2.d below.
Formaldehyde emissions shall not exceed 0.81 pound per hour and 1.79 tons per year.	Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
Phenol emissions shall not exceed 0.81 pound per hour and 1.79 tons per year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Nitrogen Dioxide (NO <sub>x</sub> ) emissions shall not exceed 0.70 pound per hour and 3.07 tons per year from the combustion of natural gas.	Use of non-photochemically reactive materials. See Section B.4 below.
Carbon Monoxide (CO) emissions shall not exceed 0.59 pound per hour and 2.58 tons per	See Section A.2.a below.

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**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility shall not exceed 9.0 tons/year for any individual HAP and 24.0 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.b** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.
- 2.c** The short-term (lb/hour) and annual (tpy) emissions limitations for particulate, PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions were established based on potential to emit; therefore, no recordkeeping and/or reporting requirements are needed for these emissions limitations.
- 2.d** The short-term (lb/hour) emissions limitation for OC, formaldehyde, and phenol emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

**B. Operational Restrictions**

- 1. The maximum annual amount of resin, with a formaldehyde and/or phenol content of no more than 0.37 percent by weight, usage for this emissions unit shall not exceed 969,360 pounds.
- 2. The permittee shall operate the dust collectors (DSC-229 and DSC-1695) whenever this emissions unit is in operation.
- 3. The pressure drop across each dust collector shall be maintained within the range of 0.3 - 2.0 inches of water while the emissions unit is in operation.
- 4. The permittee shall not employ any photochemically reactive materials in this emissions unit.
- 5. The permittee shall only burn natural gas as fuel in this emissions unit.

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

- 1. The permittee shall maintain daily records that document any time periods when the

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dust collectors were not in service while the emissions unit was in operation.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collectors (DSC-229 and DSC-1695) 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). The permittee shall record the pressure drop across the dust collectors on a daily basis.
3. The permittee shall collect and record the following information each month for this emissions unit:
  - a. the company identification for each material employed (e.g., resin-coated sand and any liquids) and whether or not the material is a photochemically reactive material;
  - b. the resin material usage for each month, in pounds;
  - c. the maximum formaldehyde and phenol content of the resin, in percent by weight;
  - d. the OC content of each resin, in pounds OC per pound of material, as applied; and
  - e. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the resin material usage figures.

[Note: The material information must be for the materials as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).]

4. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;

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- e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];
- f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
- g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.

- 5. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the the type and quantity of fuel burned in this emissions unit.

**D. Reporting Requirements**

- 1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
- 2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on resin usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative resin usage levels. These reports shall be submitted in accordance with the reporting requirements

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specified in Part I - General Terms and Conditions, Section A of this permit.

3. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any resin with a formaldehyde and/or phenol content greater than 0.37 percent by weight. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
4. The permittee shall notify the Cleveland DAQ in writing of any record showing that any dust collector (DSC-229 or DSC-1695) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
5. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all period of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
6. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
7. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

## **E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
20% opacity, as a 6-minute average, except as provided by rule  
  
 Applicable Compliance Method:  
 If required by the Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.
  - b. Emission Limitation:  
0.76 pound per hour of PE (from dust collectors DSC-229 and DSC-1695 and oven vents)  
  
 Applicable Compliance Method:  
 Compliance with the mass emissions limitation shall be determined by using the

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following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.76 \text{ lb/hr}$$

where:

Max = 0.85 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM}} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\*  $7.01 \text{ lb/ton} = 7 \text{ lb/ton}$  from AP-42 (Table 10.2-1 for pulping) +  $0.01 \text{ lb/ton}$  from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

3.33 tons per year of PE (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, providing compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Emission Limitation:

0.76 pound per hour of  $\text{PM}_{10}$  emissions (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM-10}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM-10}}] = 0.76 \text{ lb/hr}$$

where:

Max = 0.85 ton/hr = maximum hourly throughput

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$EF_{PM-10} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$Oven_{PM-10} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable, of 40 CFR Part 60, Appendix A.

- e. Emission Limitation:  
 3.33 tons per year of  $PM_{10}$  emissions (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, providing compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
 4.91 pounds per hour of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$E = RU \times EF$$

E = maximum hourly OC emissions

RU = 218.1 lbs/hour maximum resin usage

EF = 0.0225 lb OC/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25, or an alternative method approved by Ohio EPA.

- g. Emission Limitation:  
 10.91 tons per year of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

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$$E = RU \times EF$$

E = annual OC emissions

RU = annual resin usage from records (see Section C.3.e)

EF = OC content, 0.0225 lb OC/lb resin employed

- h. Emission Limitation:  
0.81 pound per hour of formaldehyde emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_F = 0.81 \text{ lb/hr}$$

RU = 218.1 lbs/hr = maximum hourly resin usage

EF<sub>F</sub> = 0.0037 lb formaldehyde/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 63, Appendix A, Method 420, or an alternative method approved by Ohio EPA.

- i. Emission Limitation:  
1.79 tons per year of formaldehyde emissions

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Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_F$$

E = annual formaldehyde emissions

RU = annual resin usage from records (see Section C.3.e)

$EF_F = 0.0037$  lb formaldehyde/lb resin employed

- j. Emission Limitation:  
0.81 pound per hour of phenol emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_P = 0.81 \text{ lb/hr}$$

RU = 218.1 lbs/hr = maximum hourly resin usage

$EF_P = 0.0037$  lb phenol/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with U.S. EPA Air Toxic Test Method TO-4a, or an alternative method approved by Ohio EPA.

- k. Emission Limitation:  
1.79 tons per year of phenol emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_P$$

E = annual phenol emissions

RU = annual resin usage from records (see Section C.3.e)

$EF_P = 0.0037$  lb phenol/lb resin employed

- l. Emission Limitation:

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9.0 tons individual HAP/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

m. Emission Limitation:

24.0 tons combined HAPs/year for the list of emissions unit in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

n. Emission Limitation:

0.70 pound per hour of NO<sub>x</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (7.156) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or an alternative method approved by Ohio EPA.

o. Emission Limitation:

3.07 tons per year of NO<sub>x</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

p. Emission Limitation:

0.59 pound per hour of CO emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying

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the emission factor (0.082) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (7.156) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or an alternative method approved by Ohio EPA.

- q. Emission Limitation:  
2.58 tons per year of CO emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- r. Emission Limitation:  
0.05 pound per hour of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (7.156) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A (Total PE are equivalent to total PM<sub>10</sub> emissions).

- s. Emission Limitation:  
0.22 ton per year of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation

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by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

## **F. Miscellaneous Requirements**

1. The permittee shall conduct, or have conducted, a detailed pollution prevention project to determine the technical and economic feasibility of reducing OC emissions from the sources at the facility. The detailed pollution prevention project shall research and determine the technical and economic feasibility of converting the current binders and release agents to lower emitting materials. This project shall include, at the minimum, the following steps:
  - a. Researching the availability of lower emitting acceptable binders, resins and release agents.
  - b. Determining if lower emitting materials can be economically developed.
  - c. Conducting trials of available materials to determine if the use of the materials are technically feasible, and to determine if the use of the materials is economically reasonable.

The work on the pollution prevention project shall continue for at least three years.

The permittee shall submit an annual report and supporting information that describes the work performed and the results obtained from the above described project during the most recent year. This report shall be submitted to the Cleveland DAQ.

2. The following terms and conditions are federally enforceable: A. - E.

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**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>
P050 - Oven No. 11 (consisting of a mixer, forming machine, 6.56 mmBtu/hour natural gas-fired oven, tray cleaner and dust collectors)	OAC rule 3745-31-05(A)(3)
This PTI supercedes PTI 13-03353 issued on 03/25/1998.	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11
	OAC rule 3745-21-07(G)(2)
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V

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<u>Applicable Emissions Limitations/Control Measures</u>	
Particulate emissions (PE) shall not exceed 0.53 pounds per hour and 2.32 tons per year.	year from the combustion of natural gas.  PE/PM <sub>10</sub> emissions shall not exceed 0.05 pound per hour and 0.22 ton per year from the combustion of natural gas.
PM <sub>10</sub> emissions shall not exceed 0.53 pounds per hour and 2.32 tons per year.	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(2), and 3745-31-05(C).
Organic compound (OC) emissions shall not exceed 3.21 pounds per hour and 6.58 tons per year.	See Section A.2.c and A.2.d below.
Formaldehyde emissions shall not exceed 0.53 pound per hour and 1.08 tons per year.	Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
Phenol emissions shall not exceed 0.53 pound per hour and 1.08 tons per year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Nitrogen Dioxide (NO <sub>x</sub> ) emissions shall not exceed 0.64 pound per hour and 2.80 tons per year from the combustion of natural gas.	Use of non-photochemically reactive materials. See Section B.4 below.  See Section A.2.a below.
Carbon Monoxide (CO) emissions shall not exceed 0.54 pound per hour and 2.37 tons per	

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- 2.a** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility shall not exceed 9.0 tons/year for any individual HAP and 24.0 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.b** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.
- 2.c** The short-term (lb/hour) and annual (tpy) emissions limitations for particulate, PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions were established based on potential to emit; therefore, no recordkeeping and/or reporting requirements are needed for these emissions limitations.
- 2.d** The short-term (lb/hour) emissions limitation for OC, formaldehyde, and phenol emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

**B. Operational Restrictions**

- 1. The maximum annual amount of resin, with a formaldehyde and/or phenol content of no more than 0.37 percent by weight, usage for this emissions unit shall not exceed 584,688 pounds.
- 2. The permittee shall operate the dust collector (DSC-1715) whenever this emissions unit is in operation.
- 3. The pressure drop across each dust collector shall be maintained within the range of 0.3 - 2.0 inches of water while the emissions unit is in operation.
- 4. The permittee shall not employ any photochemically reactive materials in this emissions unit.
- 5. The permittee shall only burn natural gas as fuel in this emissions unit.

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

- 1. The permittee shall maintain daily records that document any time periods when the

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dust collectors were not in service while the emissions unit was in operation.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collector (DSC-1715) 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). The permittee shall record the pressure drop across the dust collectors on a daily basis.
3. The permittee shall collect and record the following information each month for this emissions unit:
  - a. the company identification for each material employed (e.g., resin-coated sand and any liquids) and whether or not the material is a photochemically reactive material;
  - b. the resin material usage for each month, in pounds;
  - c. the maximum formaldehyde and phenol content of the resin, in percent by weight;
  - d. the OC content of each resin, in pounds OC per pound of material, as applied; and
  - e. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the resin material usage figures.

[Note: The material information must be for the materials as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).]

4. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;
  - e. the total individual HAP emissions from all HAP containing materials, in pounds

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or tons per month [for each HAP the sum of (b) times (d) for each material];

- f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
- g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.

- 5. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**D. Reporting Requirements**

- 1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
- 2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on resin usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative resin usage levels. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

3. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any resin with a formaldehyde and/or phenol content greater than 0.37 percent by weight. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
4. The permittee shall notify the Cleveland DAQ in writing of any record showing that any dust collector (DSC-229 or DSC-1695) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
5. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all period of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
6. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
7. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

## **E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
20% opacity, as a 6-minute average, except as provided by rule  
  
Applicable Compliance Method:  
If required by the Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.
  - b. Emission Limitation:  
0.53 pound per hour of PE (from dust collectors DSC-229 and DSC-1695 and oven vents)  
  
Applicable Compliance Method:  
Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

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$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.53 \text{ lb/hr}$$

where:

Max = 0.6 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM}} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:  
2.32 tons per year of PE (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation:  
0.53 pound per hour of  $\text{PM}_{10}$  emissions (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM-10}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM-10}}] = 0.53 \text{ lb/hr}$$

where:

Max = 0.6 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM-10}} = 7.01 \text{ lb/ton}^*$

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CE = 99% = control efficiency of each dust collector

Oven<sub>PM-10</sub> = 0.82 lb/ton (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable.

- e. Emission Limitation:  
 2.32 tons per year of PM<sub>10</sub> emissions (from dust collectors DSC-229 and DSC-1695 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
 3.21 pounds per hour of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$E = RU \times EF$$

E = maximum hourly OC emissions

RU = 142.5 lbs/hour maximum resin usage

EF = 0.0225 lb OC/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25, or an alternative method approved by Ohio EPA.

- g. Emission Limitation:  
 6.58 tons per year of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF$$

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E = annual OC emissions

RU = annual resin usage from records (see Section C.3.e)

EF = OC content, 0.0225 lb OC/lb resin employed

- h. Emission Limitation:  
0.53 pounds per hour of formaldehyde emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_F = 0.53 \text{ lb/hr}$$

RU = 142.5 lbs/hr = maximum hourly resin usage

EF<sub>F</sub> = 0.0037 lb formaldehyde/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 63, Appendix A, Method 420, or an alternative method approved by Ohio EPA.

- i. Emission Limitation:  
1.08 tons per year of formaldehyde emissions

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Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_F$$

E = annual formaldehyde emissions

RU = annual resin usage from records (see Section C.3.e)

EF<sub>F</sub> = 0.0037 lb formaldehyde/lb resin employed

- j. Emission Limitation:  
0.53 pound per hour of phenol emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_P = 0.53 \text{ lb/hr}$$

RU = 142.5 lbs/hr = maximum hourly resin usage

EF<sub>P</sub> = 0.0037 lb phenol/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with U.S. EPA Air Toxic Test Method TO-4a, or an alternative method approved by Ohio EPA.

- k. Emission Limitation:  
1.08 tons per year of phenol emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_P$$

E = annual phenol emissions

RU = annual resin usage from records (see Section C.3.e)

EF<sub>P</sub> = 0.0037 lb phenol/lb resin employed

- l. Emission Limitation:

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9.0 tons individual HAP/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

m. Emission Limitation:

24.0 tons combined HAPs/year for the list of emissions unit in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

n. Emission Limitation:

0.64 pound per hour of NO<sub>x</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.56) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or an alternative method approved by Ohio EPA.

o. Emission Limitation:

2.80 tons per year of NO<sub>x</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

p. Emission Limitation:

0.54 pound per hour of CO emissions from the combustion of natural gas

Applicable Compliance Method:

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Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.082) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.56) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or an alternative method approved by Ohio EPA.

- q. Emission Limitation:  
2.37 tons per year of CO emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- r. Emission Limitation:  
0.05 pound per hour of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.56) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A (Total PE are equivalent to total PM<sub>10</sub> emissions).

- s. Emission Limitation:  
0.22 ton per year of PE/PM<sub>10</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

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The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

## **F. Miscellaneous Requirements**

1. The permittee shall conduct, or have conducted, a detailed pollution prevention project to determine the technical and economic feasibility of reducing OC emissions from the sources at the facility. The detailed pollution prevention project shall research and determine the technical and economic feasibility of converting the current binders and release agents to lower emitting materials. This project shall include, at the minimum, the following steps:
  - a. Researching the availability of lower emitting acceptable binders, resins and release agents.
  - b. Determining if lower emitting materials can be economically developed.
  - c. Conducting trials of available materials to determine if the use of the materials are technically feasible, and to determine if the use of the materials is economically reasonable.

The work on the pollution prevention project shall continue for at least three years.

The permittee shall submit an annual report and supporting information that describes the work performed and the results obtained from the above described project during the most recent year. This report shall be submitted to the Cleveland DAQ.

2. The following terms and conditions are federally enforceable: A. - E.

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Emissions Unit ID: P057

Issued: To be entered upon final issuance

**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>
P057 - 3 Coating mixers vented to a baghouse  This PTI supercedes PTI 13-03083 issued on 09/25/1996.	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.50 pound per hour and 2.19 tons per year.
		PM <sub>10</sub> emissions shall not exceed 0.50 pound per hour and 2.19 tons per year.
	OAC rule 3745-17-07(A)	See Section A.2.a below.
	OAC rule 3745-17-11	Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
		The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The short-term (lb/hour) and annual (tpy) emissions limitations for particulate and PM<sub>10</sub> emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

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Emissions Unit ID: P057

**Issued: To be entered upon final issuance****B. Operational Restrictions**

1. The permittee shall operate the baghouse (DSC-582) whenever this emissions unit is in operation.
2. The pressure drop across the baghouse shall be maintained within the range of 1.0 - 6.0 inches of water while the emissions unit is in operation.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the baghouse (DSC-582) was not in service while the emissions unit was in operation.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse (DSC-582) 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). The permittee shall record the pressure drop across the dust collector on a daily basis.

**D. Reporting Requirements**

1. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any record showing that the baghouse was not in service when the emissions unit was in operating. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

**E. Testing Requirements**

1. Compliance with the emissions limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
  
20% opacity from stack, as a 6-minute average, except as provided by rule.

Emissions Unit ID: P057

Applicable Compliance Method:

If required by the Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.

- b. Emission Limitation:  
0.50 pound per hour of PE

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 0.50 \text{ lb/hr}$$

where:

Max = 2.5 tons/hr = maximum hourly throughput

EF = 20.0 lbs/ton\*

CE = 99% = control efficiency of the baghouse

\* 20.0 lb/ton from AP-42 (Table 6.4-1 for paint mixing)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:  
2.19 tons per year of PE

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emissions Limitations:  
0.50 pound per hour of PM<sub>10</sub> emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$(\text{Max}) \times (\text{EF}_{\text{PM}}) \times (1 - \text{CE}) = 0.50 \text{ lb/hr}$$

where:

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Max = 2.5 tons/hr = maximum hourly throughput

EF = 20.0 lbs/ton\*

CE = 99% = control efficiency of the baghouse

\* 20.0 lb/ton from AP-42 (Table 6.4-1 for paint mixing)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and/or 202, as applicable, of 40 CFR Part 60, Appendix A.

- e. Emission Limitation:  
2.19 tons per year of PM<sub>10</sub> emissions

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

**F. Miscellaneous Requirements**

none

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**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>
P059 - Oven 2 North (consisting of a mixer, forming machine, 3.3 mmBtu/hour natural gas-fired oven, and a dust collector)	OAC rule 3745-31-05(A)(3)
This PTI supercedes PTI 13-03929 issued final on 03/07/2002.	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11
	OAC rule 3745-21-07(G)(1)
	OAC rule 3745-31-05(C)

Synthetic Minor to avoid MACT and Title V

Emissions Unit ID: P059

3745-31-05(C).

Applicable Emissions Limitations/Control Measures

See Sections A.2.c and A.2.d below.

Particulate emissions (PE) shall not exceed 0.21 pounds per hour and 0.92 tons per year.

Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

PM<sub>10</sub> emissions shall not exceed 0.21 pounds per hour and 0.92 tons per year.

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

Organic compound (OC) emissions shall not exceed 1.43 tons per year.

OC emissions shall not exceed 3 pounds per hour and 15 pounds per day.

Formaldehyde emissions shall not exceed 0.43 pound per hour and 0.99 tons per year.

See Section A.2.a below.

Phenol emissions shall not exceed 0.43 pound per hour and 0.99 tons per year.

Nitrogen Dioxide (NO<sub>x</sub>) emissions shall not exceed 0.32 pound per hour and 1.45 tons per year from the combustion of natural gas.

Carbon Monoxide (CO) emissions shall not exceed 0.27 pound per hour and 1.18 tons per year from the combustion of natural gas.

PE/PM<sub>10</sub> emissions shall not exceed 0.03 pound per hour and 0.13 ton per year from the combustion of natural gas.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07-G(1), and

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- 2.a** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility shall not exceed 9.0 tons/year for any individual HAP and 24.0 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.b** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.
- 2.c** The short-term (lb/hour) and annual (tpy) emissions limitations for particulate, PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.
- 2.d** The short-term (lb/hour) emissions limitations for formaldehyde and phenol emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

**B. Operational Restrictions**

- 1. The maximum annual amount of resin, with a formaldehyde and/or phenol content of no more than 0.9 percent by weight, usage for this emissions unit shall not exceed 219,232 pounds.
- 2. The permittee shall operate the dust collector (DSC-911) whenever this emissions unit is in operation.
- 3. The pressure drop across the dust collector shall be maintained within the range of 1.0-6.0 inches of water while the emissions unit is in operation:
- 4. The permittee shall only burn natural gas as fuel in this emissions unit.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. The permittee shall maintain daily records that document any time periods when the dust collector was not in service while the emissions unit was in operation.
- 2. The permittee shall properly operate and maintain equipment to monitor the pressure

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drop across the dust collector (DSC-911) 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). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.

3. The permittee shall collect and record the following information for each day this emissions unit is in operation:
  - a. the company identification for each material employed (i.e., resin-coated sand and any liquids);
  - b. the amount, in pounds, of each material employed;
  - c. the amount, in pounds, of resin employed;
  - d. the maximum formaldehyde and phenol content of the resin, in percent by weight;
  - e. the hours of operation during each day;
  - f. the daily OC emission rate, in pounds per day using the method outlined in Section E.2;
  - g. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the resin material usage figures, and;
  - h. the average hourly OC emission rate, in pounds per hour using the following equation:  $[(f)/(e)]$ .
4. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];

- d. the number of pounds of each HAP containing material employed;
- e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];
- f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
- g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.

5. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit deviation (excursion) reports which include the following information:
  - a. an identification of each day during which the average hourly organic compound emissions exceeded 3.0 pounds per hour, and the actual average hourly organic compound emissions for each such day; and

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- b. an identification of each day during which the total organic compound emissions exceeded 15 pounds per day, and the actual organic compound emissions for each such day.
3. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on resin usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative resin usage levels. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall notify the Cleveland DAQ in writing of any record showing the use of any resin with a formaldehyde and/or phenol content greater than 0.9 percent by weight. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
5. The permittee shall notify the Cleveland DAQ in writing of any record showing that the dust collector (DSC-911) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
6. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all period of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
7. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
0.21 pound per hour of PE (total from dust collector DSC-911 and oven vents)  
  
Applicable Compliance Method:  
Compliance with the mass emissions limitation shall be determined by using the

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following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.21 \text{ lb/hr}$$

where:

Max = 0.23 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM}} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- b. Emission Limitation:  
0.92 tons per year of PE (total from dust collector DSC-911 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation:  
0.21 pound per hour of  $\text{PM}_{10}$  emissions (total from dust collector DSC-911 and oven vents)

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM-10}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM-10}}] = 0.21 \text{ lb/hr}$$

where:

Max = 0.23 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM-10}} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM-10}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

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If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable.

- d. Emission Limitation:  
0.92 tons per year of PM<sub>10</sub> emissions (total from dust collectors DSC-911 and oven vents)

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation:  
15 pounds per day of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF$$

E = daily OC emissions

RU = resin usage from daily records (see Section C.3.)

EF = 0.013 lb OC/lb resin employed

- f. Emission Limitation:  
3 pounds per hour of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the average hourly rate calculated by dividing the daily total OC emissions by the number of operating hours.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25, or an alternative method approved by Ohio EPA.

- g. Emission Limitation:

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1.92 tons per year of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF$$

E = annual OC emissions

RU = annual resin usage from records (see Section C.3.g)

EF = OC content, 0.013 lb OC/lb resin employed

- h. Emission Limitation:  
0.43 pounds per hour of formaldehyde emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_F = 0.43 \text{ lb/hr}$$

RU = 47.4 lbs/hr = maximum hourly resin usage

EF<sub>F</sub> = 0.009 lb formaldehyde/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 63, Appendix A, Method 420, or an alternative method approved by Ohio EPA.

- i. Emission Limitation:  
1.08 tons per year of formaldehyde emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_F$$

E = annual formaldehyde emissions

RU = annual resin usage from records (see Section C.3.g)

EF<sub>F</sub> = 0.009 lb formaldehyde/lb resin employed

- j. Emission Limitation:  
0.43 pound per hour of phenol emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the

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following one-time calculation for potential to emit:

$$RU \times EF_P = 0.43 \text{ lb/hr}$$

RU = 47.4 lbs/hr = maximum hourly resin usage

EF<sub>P</sub> = 0.009 lb phenol/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with U.S. EPA Air Toxic Test Method TO-4a, or an alternative method approved by Ohio EPA.

- k. Emission Limitation:  
1.08 tons per year of phenol emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_P$$

E = annual phenol emissions

RU = annual resin usage from records (see Section C.3.g)

EF<sub>P</sub> = 0.009 lb phenol/lb resin employed

- l. Emission Limitation:  
9.0 tons individual HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

- m. Emission Limitation:  
24.0 tons combined HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

- n. Emission Limitation:

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20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method(s):

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

- o. Emission Limitation:  
0.32 pound per hour of NO<sub>x</sub> emissions from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (3.3) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or an alternative method approved by Ohio EPA.

- p. Emission Limitation:  
1.45 tons per year of NO<sub>x</sub> emissions from the combustion of natural gas

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**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- q. Emission Limitation:  
0.27 pound per hour of CO emissions from the combustion of natural gas

**Applicable Compliance Method:**

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.082) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (3.3) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or an alternative method approved by Ohio EPA.

- r. Emission Limitation:  
1.18 tons per year of CO emissions from the combustion of natural gas

**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- s. Emission Limitation:  
0.03 pound per hour of PE/PM<sub>10</sub> from the combustion of natural gas

**Applicable Compliance Method:**

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (3.3) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance with the

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allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A (Total PE are equivalent to total PM<sub>10</sub> emissions).

- t. Emission Limitation:  
0.13 ton per year of PE/PM<sub>10</sub> from the combustion of natural gas

**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

**F. Miscellaneous Requirements**

1. The permittee shall conduct, or have conducted, a detailed pollution prevention project to determine the technical and economic feasibility of reducing OC emissions from the sources at the facility. The detailed pollution prevention project shall research and determine the technical and economic feasibility of converting the current binders and release agents to lower emitting materials. This project shall include, at the minimum, the following steps:
  - a. Researching the availability of lower emitting acceptable binders, resins and release agents.
  - b. Determining if lower emitting materials can be economically developed.
  - c. Conducting trials of available materials to determine if the use of the materials are technically feasible, and to determine if the use of the materials is economically reasonable.

The work on the pollution prevention project shall continue for at least three years.

The permittee shall submit an annual report and supporting information that describes the work performed and the results obtained from the above described project during the most recent year. This report shall be submitted to the Cleveland DAQ.

2. The following terms and conditions are federally enforceable: A. - E.

**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>
P060 - Oven No. 2 South; consisting of a mixer, forming machine, 2.4 MMBTU/hour natural gas-fired oven, and a dust collector.	OAC rule 3745-31-05(A)(3)
This PTI supercedes PTI 13-03463 issued on 09/29/1999.	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11
	OAC rule 3745-21-07(G)(1)
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V

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Applicable Emissions Limitations/Control Measures	of natural gas.
Particulate emissions (PE) shall not exceed 0.16 pounds per hour and 0.70 tons per year.	PE/PM <sub>10</sub> emissions shall not exceed 0.01 pound per hour and 0.04 ton per year from the combustion of natural gas.
PM <sub>10</sub> emissions shall not exceed 0.16 pounds per hour and 0.70 tons per year.	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(1), and 3745-31-05(C).
Organic compound (OC) emissions shall not exceed 1.95 tons per year.	See Section A.2.c below.
Formaldehyde emissions shall not exceed 0.13 pound per hour and 0.36 tons per year.	Visible emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
Phenol emissions shall not exceed 0.13 pound per hour and 0.36 tons per year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Nitrogen Dioxide (NO <sub>x</sub> ) emissions shall not exceed 0.24 pound per hour and 1.05 tons per year from the combustion of natural gas.	OC emissions shall not exceed 3 pounds per hour and 15 pounds per day.
Carbon Monoxide (CO) emissions shall not exceed 0.20 pound per hour and 0.88 ton per year from the combustion	See Section A.2.a below.

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility shall not exceed 9.0 tons/year for any individual HAP and 24.0 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.b** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.
- 2.c** The short-term (lb/hour) and annual (tpy) emissions limitations for particulate, PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.
- 2.d** The short-term (lb/hour) emissions limitations for formaldehyde and phenol emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

**B. Operational Restrictions**

- 1. The maximum annual amount of resin, with a formaldehyde and/or phenol content of no more than 2.4 percent by weight, usage for this emissions unit shall not exceed 29,952 pounds.
- 2. The permittee shall operate the dust collectors (DSC-911) whenever this emissions unit is in operation.
- 3. The pressure drop across each dust collector shall be maintained within the range of 1.0-6.0 inches of water while the emissions unit is in operation.
- 4. The permittee shall only burn natural gas as fuel in this emissions unit.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the emissions unit was in operation.
- 2. The permittee shall properly operate and maintain equipment to monitor the pressure

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drop across each of the dust collectors (DSC-911) 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). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.

3. The permittee shall collect and record the following information for each day this emissions unit is in operation:
  - a. the company identification for each material employed (i.e., resin-coated sand and any liquids);
  - b. the amount, in pounds, of each material employed;
  - c. the amount, in pounds, of resin employed;
  - d. the maximum formaldehyde and phenol content of the resin, in percent by weight;
  - e. the hours of operation during each day;
  - f. the daily OC emission rate, in pounds per day using the method outlined in Section E.2;
  - g. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the resin material usage figures, and;
  - h. the average hourly OC emission rate, in pounds per hour using the following equation:  $[(f)/(e)]$ .
4. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;
  - e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];

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- f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
- g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality contact. This information does not have to be kept on an individual emission unit basis.

**D. Reporting Requirements**

- 1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
- 2. The permittee shall submit deviation (excursion) reports which include the following information:
  - a. an identification of each day during which the average hourly organic compound emissions exceeded 3.0 pounds per hour, and the actual average hourly organic compound emissions for each such day; and
  - b. an identification of each day during which the total organic compound emissions exceeded 15 pounds per day, and the actual organic compound emissions for each such day.

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3. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on resin usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative resin usage levels. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in writing of any record showing the use of any resin with a formaldehyde and/or phenol content greater than 2.4 percent by weight. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
5. The permittee shall notify the Cleveland DAQ in writing of any record showing that any dust collector (DSC-911) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
6. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all period of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

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

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

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- a. Emission Limitation:  
20% opacity, as a 6-minute average, except as provided by rule

## Applicable Compliance Method:

If required by the Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.

- b. Emission Limitation:  
0.16 pound per hour of PE (from dust collectors DSC-911 and oven vents)

## Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.16 \text{ lb/hr}$$

where:

Max = 0.17 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM}} = 9.2 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\*  $9.2 \text{ lb/ton} = 7 \text{ lb/ton}$  from AP-42 (Table 10.2-1 for pulping) +  $2.2 \text{ lb/ton}$  from AP-42 (Table 11.12-2 for refractory manufacturing blow pot)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:  
0.70 tons per year of PE (from dust collector DSC-911 and oven vents)

## Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

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- d. Emission Limitation:  
0.16 pound per hour of PM<sub>10</sub> emissions (from dust collectors DSC-911 and oven vents)

## Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM-10}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM-10}}] = 0.16 \text{ lb/hr}$$

where:

Max = 0.17 ton/hr = maximum hourly throughput

EF<sub>PM-10</sub> = 9.2 lb/ton\*

CE = 99% = control efficiency of each dust collector

Oven<sub>PM-10</sub> = 0.82 lb/ton (from AP-42, Table 11.5-5 for refractory ovens)

\* 9.20 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 2.2 lb/ton from AP-42 (Table 11.12-2 for refractory manufacturing blow pot)

If required by the Ohio EPA or Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable.

- e. Emission Limitation:  
0.70 tons per year of PM<sub>10</sub> emissions (from dust collectors DSC-911 and oven vents)

## Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
15 pounds per day of OC emissions (total from oven vents)

## Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

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$$E = RU \times EF$$

E = daily OC emissions

RU = resin usage from daily records (see Section C.3.)

EF = 0.130 lb OC/lb resin employed

- g. Emission Limitation:  
3 pounds per hour of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the average hourly rate calculated by dividing the daily total OC emissions by the number of operating hours.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25, or an alternative method approved by Ohio EPA.

- h. Emission Limitation:  
1.92 tons per year of OC emissions (total from oven vents)

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF$$

E = annual OC emissions

RU = annual resin usage from records (see Section C.3.g)

EF = OC content, 0.130 lb OC/lb resin employed

- i. Emission Limitation:  
0.13 pounds per hour of formaldehyde emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_F = 0.13 \text{ lb/hr}$$

RU = 5.6 lbs/hr = maximum hourly resin usage

EF<sub>F</sub> = 0.024 lb formaldehyde/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 63, Appendix

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A, Method 420, or an alternative method approved by Ohio EPA.

- j. Emission Limitation:  
0.36 tons per year of formaldehyde emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_F$$

E = annual formaldehyde emissions

RU = annual resin usage from records (see Section C.3.g)

$EF_F = 0.024$  lb formaldehyde/lb resin employed

- k. Emission Limitation:  
0.13 pound per hour of phenol emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_P = 0.13 \text{ lb/hr}$$

RU = 5.6 lbs/hr = maximum hourly resin usage

$EF_P = 0.024$  lb phenol/lb resin employed

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with U.S. EPA Air Toxic Test Method TO-4a, or an alternative method approved by Ohio EPA.

- l. Emission Limitation:  
0.36 tons per year of phenol emissions

Applicable Compliance Method:

Compliance with this emission limitation may be based on the record keeping in Section C.3. and the following equation:

$$E = RU \times EF_P$$

E = annual phenol emissions

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RU = annual resin usage from records (see Section C.3.g)

EF<sub>P</sub> = 0.024 lb phenol/lb resin employed

- m. Emission Limitation:  
9.0 tons individual HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

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- n. Emission Limitation:  
24.0 tons combined HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

## Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.4.

- o. Emission Limitation:  
0.24 pound per hour of NO<sub>x</sub> emissions from the combustion of natural gas

## Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (2.4) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland Division of Air Quality, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or an alternative method approved by Ohio EPA.

- p. Emission Limitation:  
1.05 tons per year of NO<sub>x</sub> emissions from the combustion of natural gas

## Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- q. Emission Limitation:  
0.20 pound per hour of CO emissions from the combustion of natural gas

## Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying

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the emission factor (0.082) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (2.4) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or an alternative method approved by Ohio EPA.

- r. Emission Limitation:  
0.88 tons per year of CO emissions from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- s. Emission Limitation:  
0.01 pound per hour of PE/PM<sub>10</sub> from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (2.4) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A (Total PE are equivalent to total PM<sub>10</sub> emissions).

- t. Emission Limitation:  
0.04 ton per year of PE/PM<sub>10</sub> from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

## **F. Miscellaneous Requirements**

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1. The permittee shall conduct, or have conducted, a detailed pollution prevention project to determine the technical and economic feasibility of reducing OC emissions from the sources at the facility. The detailed pollution prevention project shall research and determine the technical and economic feasibility of converting the current binders and release agents to lower emitting materials. This project shall include, at the minimum, the following steps:
  - a. Researching the availability of lower emitting acceptable binders, resins and release agents.
  - b. Determining if lower emitting materials can be economically developed.
  - c. Conducting trials of available materials to determine if the use of the materials are technically feasible, and to determine if the use of the materials is economically reasonable.

The work on the pollution prevention project shall continue for at least three years.

The permittee shall submit an annual report and supporting information that describes the work performed and the results obtained from the above described project during the most recent year. This report shall be submitted to the Cleveland DAQ.

2. The following terms and conditions are federally enforceable: A. - E.

**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>
P061 - Filter Production Line with a 6.0 MMBTU/hr natural gas-fired kiln, two dust collectors, and thermal incinerator	OAC rule 3745-31-05(A)(3)
This PTI supercedes PTI 13-3543 issued on 11/03/1999.	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11
	OAC rule 3745-21-07(G)(1)
	OAC rule 3745-31-05(C) Synthetic Minor to avoid MACT and Title V

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Applicable Emissions Limitations/Control Measures	year from the combustion of natural gas.
Particulate emissions (PE) shall not exceed 0.38 pound per hour and 1.66 tons per year.	PE/PM <sub>10</sub> emissions shall not exceed 0.05 pound per hour and 0.22 ton per year from the combustion of natural gas.
PM <sub>10</sub> emission shall not exceed 0.38 pounds per hour and 1.66 tons per year.	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-31-05(C).
Organic compound (OC) emissions shall not exceed 0.10 pound per hour and 0.44 ton per year.	See Section A.1.2.c below.  Visible emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
Formaldehyde emissions shall not exceed 0.02 pound per hour and 0.09 ton per year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Phenol emissions shall not exceed 0.02 pound per hour and 0.09 ton per year.	The emission limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
Nitrogen Dioxide (NO <sub>x</sub> ) emissions shall not exceed 0.59 pound per hour and 2.58 tons per year from the combustion of natural gas.	See Section A.2.a below.
Carbon Monoxide (CO) emissions shall not exceed 0.49 pound per hour and 2.15 tons per	

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**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility shall not exceed 9.0 tons/year for any individual HAP and 24.0 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
- 2.b** The following list of emissions units at this facility emit HAPs: P013, P016, P017, P018, P032, P048, P050, P059, P060, and P061.
- 2.c** The short-term (lb/hour) and annual (tpy) emissions limitations for particulate, PM<sub>10</sub>, OC, formaldehyde, phenol, NO<sub>x</sub>, and CO emissions were established based on potential to emit; therefore, no record keeping and/or reporting requirements are needed for these emissions limitations.

**B. Operational Restrictions**

- 1. The maximum annual amount of resin, with a formaldehyde content of no more than 2.0 percent by weight, usage for this emissions unit shall not exceed 473,040 pounds.
- 2. The permittee shall operate the dust collectors (DSC-164 and DSC-1810) whenever this emissions unit is in operation.
- 3. The pressure drop across each dust collector shall be maintained within the range of 1.0-6.0 inches of water while the emissions unit is in operation.
- 4. The average temperature of the exhaust gases from the thermal incinerator, for any 3-hour block of time, shall not be less than 1,420 degrees Fahrenheit.
- 5. The permittee shall only burn natural gas as fuel in this emissions unit.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the emissions unit was in operation.
- 2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across each of the dust collectors (DSC-164 and DSC-1810) 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

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operating manual(s). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator 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 thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test that demonstrated the emissions unit to be 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.
5. The permittee shall collect and record the following information each month for the entire facility:
  - a. the name and identification number of each HAP containing material employed;
  - b. the individual HAP content for each HAP, in pounds of individual HAP per pound of material;
  - c. the total combined HAP content, in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)];
  - d. the number of pounds of each HAP containing material employed;
  - e. the total individual HAP emissions from all HAP containing materials, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material];
  - f. the total combined HAP emissions from all HAP containing materials, in pounds or tons per month [the sum of (c) times (d) for each material];
  - g. the updated rolling, 12-month summation of emissions for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI; and

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- h. the updated rolling, 12-month summation of emissions for total combined HAPs, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of this permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Cleveland Division of Air Quality (Cleveland DAQ) contact. This information does not have to be kept on an individual emission unit basis.

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**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month individual HAP material usage and/or 12-month combined HAPs material usage for the list of emissions units referenced in Section A.2.b and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative HAPs material usage. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall notify the Cleveland DAQ in writing of any record showing that any dust collector (DSC-164 and DSC-1810) was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
3. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all period of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in this permit.

**E. Testing Requirements**

1. Compliance with the emissions limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
20% opacity, as a 6-minute average, except as provided by rule  
  
Applicable Compliance Method:  
If required by the Ohio EPA or the Cleveland DAQ, 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 U.S. EPA Reference Method 9.
  - b. Emission Limitation:

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**Foseco Metallurgical, Incorporated**

**PTI Application: 13-04528**

**Issue**

**Facility ID: 1318126134**

Emissions Unit ID: P061

0..38 pound per hour of PE

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Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.38 \text{ lb/hr}$$

where:

Max = 0.43 ton/hr = maximum hourly throughput

$\text{EF}_{\text{PM}} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$\text{Oven}_{\text{PM}} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\* 7.01 lb/ton = 7 lb/ton from AP-42 (Table 10.2-1 for pulping) + 0.01 lb/ton from engineering judgement (for tray cleaning)

If required by the Ohio EPA or the Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:  
1.66 tons per year of PE

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation:  
0.38 pound per hour of  $\text{PM}_{10}$  emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$\text{Max} \times [(\text{EF}_{\text{PM}}) \times (1 - \text{CE}) + \text{Oven}_{\text{PM}}] = 0.38 \text{ lb/hr}$$

where:

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Max = 0.43 ton/hr = maximum hourly throughput

$EF_{PM} = 7.01 \text{ lb/ton}^*$

CE = 99% = control efficiency of each dust collector

$Oven_{PM} = 0.82 \text{ lb/ton}$  (from AP-42, Table 11.5-5 for refractory ovens)

\*  $7.01 \text{ lb/ton} = 7 \text{ lb/ton}$  from AP-42 (Table 10.2-1 for pulping) +  $0.01 \text{ lb/ton}$  from engineering judgement (for tray cleaning)

If required by the Ohio EPA or Cleveland DAQ, compliance with the allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 201, 201A, and 202, as applicable.

- e. Emission Limitation:  
1.66 tons per year of  $PM_{10}$  emissions

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation:  
0.10 pound per hour OC emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_{oc} \times (1 - CE) = 0.10 \text{ lb/hr}$$

$RU = 54.0 \text{ lbs/hr}$  = maximum hourly resin usage

$EF_{oc} = 0.092 \text{ lb OC/lb resin employed}$

CE = 0.99 control efficiency

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25, or an alternative method approved by Ohio EPA.

- g. Emission Limitation:  
0.44 ton per year of OC emissions

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**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- h. **Emission Limitation:**  
0.02 pound per hour of formaldehyde emissions

**Applicable Compliance Method:**

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_F \times (1 - CE) = 0.02 \text{ lb/hr}$$

RU = 54.0 lbs/hr = maximum hourly resin usage

EF<sub>F</sub> = 0.02 lb formaldehyde/lb resin employed

CE = 0.99 control efficiency

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 63, Appendix A, Method 420, or an alternative method approved by Ohio EPA.

- i. **Emission Limitation:**  
0.10 ton per year of formaldehyde emissions

**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- j. **Emission Limitation:**  
0.02 pound per hour of phenol emissions

**Applicable Compliance Method:**

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for potential to emit:

$$RU \times EF_p \times (1 - CE) = 0.02 \text{ lb/hr}$$

RU = 54.0 lbs/hr = maximum hourly resin usage

EF<sub>p</sub> = 0.02 lb phenol/lb resin employed

CE = 0.99 control efficiency

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If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with U.S. EPA Air Toxic Test Method TO-4a, or an alternative method approved by Ohio EPA.

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- k. Emission Limitation:  
0.10 ton per year of phenol emissions

## Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- l. Emission Limitation:  
9.0 tons individual HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

## Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.5.

- m. Emission Limitation:  
24.0 tons combined HAPs/year for the list of emissions units in Section A.2.b, as a 12-month rolling summation.

## Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.5.

- n. Emission Limitation:  
0.59 pound per hour of NO<sub>x</sub> emissions from the combustion of natural gas

## Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.0) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or an alternative method approved by Ohio EPA.

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- o. Emission Limitation:  
2.58 tons per year of NOx emissions from the combustion of natural gas

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**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- p. **Emission Limitation:**  
0.49 pound per hour of CO emissions from the combustion of natural gas

**Applicable Compliance Method:**

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.082) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.0) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or an alternative method approved by Ohio EPA.

- q. **Emission Limitation:**  
2.15 tons per year of CO emissions from the combustion of natural gas

**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- r. **Emission Limitation:**  
0.05 pound per hour of PE/PM<sub>10</sub> emissions from the combustion of natural gas

**Applicable Compliance Method:**

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBtu/hour rating (6.0) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBtu/10<sup>6</sup> scf.

If required by the Ohio EPA or the Cleveland DAQ, compliance with the

**Fosec****PTI A**

Emissions Unit ID: P061

**Issued: To be entered upon final issuance**

allowable particulate emission limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A (Total PE are equivalent to total PM<sub>10</sub> emissions).

- s. Emission Limitation:  
0.22 ton per year of PE/PM<sub>10</sub> emissions from the combustion of natural gas

**Applicable Compliance Method:**

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

**F. Miscellaneous Requirements**

1. The permittee shall conduct, or have conducted, a detailed pollution prevention project to determine the technical and economic feasibility of reducing OC emissions from the sources at the facility. The detailed pollution prevention project shall research and determine the technical and economic feasibility of converting the current binders and release agents to lower emitting materials. This project shall include, at the minimum, the following steps:
  - a. Researching the availability of lower emitting acceptable binders, resins and release agents.
  - b. Determining if lower emitting materials can be economically developed.
  - c. Conducting trials of available materials to determine if the use of the materials are technically feasible, and to determine if the use of the materials is economically reasonable.

The work on the pollution prevention project shall continue for at least three years.

The permittee shall submit an annual report and supporting information that describes the work performed and the results obtained from the above described project during the most recent year. This report shall be submitted to the Cleveland DAQ.

2. The following terms and conditions are federally enforceable: A. - E.