



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 14-05736**

**Fac ID: 1409010043**

**DATE: 12/13/2005**

Bay West Paper Corp. and Mosinee Holdings Inc.  
Denise Curry  
700 Columbia Ave  
Middletown, OH 45042-1931

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, Ohio 43215

Sincerely,

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

CC: USEPA

HCDES



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**Permit To Install  
Terms and Conditions**

**Issue Date: 12/13/2005  
Effective Date: 12/13/2005**

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**FINAL PERMIT TO INSTALL 14-05736**

Application Number: 14-05736  
Facility ID: 1409010043  
Permit Fee: **\$8700**  
Name of Facility: Bay West Paper Corp. and Mosinee Holdings Inc.  
Person to Contact: Denise Curry  
Address: 700 Columbia Ave  
Middletown, OH 45042-1931

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

**700 Columbia Ave  
Middletown, Ohio**

Description of proposed emissions unit(s):

**Plant Expansion Project - Installation of new paper machine, de-inking operation, gas-fired boiler and modification of existing paper machines, de-inking operations, and coal-fired boilers.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. 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.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to

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the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

## 3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

#### 4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

#### 5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

#### 6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. 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 or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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**7. 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

**9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

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- iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

#### 10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. 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 source(s) covered by this permit.

#### 11. 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.

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**12. 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.

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### **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

## **B. State Only Enforceable Permit-To-Install General Terms and Conditions**

### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit 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 of state-only enforceable 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 state-only required 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 (i.e., postmarked) quarterly, 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. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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**4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit 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.

**5. Construction of New Sources(s)**

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.

**6. 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.

**7. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**8. Construction Compliance Certification**

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If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) 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.

**9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**C. 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	37.51
PM10	42.52
SO2	1033.70
NOx	789.59
VOC	106.85
CO	121.18
HCl	0.66

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## Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. This permit to install (PTI) shall cover the Plant Expansion Project at the Bay West Paper Corporation and Mosinee Holdings Inc. facility which involves the installation of a new paper machine line (P106), new de-inking operation (P105), and a new 180 mmBtu/hr natural-gas and oil-fired boiler (B005) and modifications to allowable emissions on existing emission units including existing paper machine lines (P101, P102), existing de-inking operations (P103, P104), and existing coal-fired boilers (B001-B004).

The federally enforceable terms and conditions of this PTI have been included for the purpose of netting out of Non-Attainment New Source Review (NNSR) and corresponding Ohio Administrative Code (OAC) regulations for volatile organic compounds (VOC) and particulate matter less than 2.5 microns (PM2.5) emissions and netting out of Prevention of Significant Deterioration (PSD) and corresponding OAC regulations for nitrogen oxides (NOx), sulfur dioxide (SO<sub>2</sub>), particulate matter less than 10 microns (PM10) and carbon monoxide (CO) emissions. PM10 emissions were used as a surrogate for PM2.5 emissions. In order to verify that the emissions of these pollutants do not exceed the allowable emission rates described in the netting table below, the permittee must comply with the limitations specified in each emission unit's respective terms and conditions

Following the NSR definitions in OAC rule 3745-31-01(III) and OAC rule 3745-31-01(O), the actual baseline emissions were based on a consecutive 24-month period within 10 years of the permit application for the Plant Expansion Project, submitted June 14, 2005. Bay West Paper Corporation and Mosinee Holdings Inc. used the period of 1996 - 1997 as the baseline for emission calculations of the following pollutants: total particulate emissions (PE), particulate matter less than 10 microns (PM10), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NOx), and carbon monoxide (CO). Bay West Paper Corporation and Mosinee Holdings Inc. used the period of 1997 - 1998 as the baseline for emission calculations of volatile organic compounds (VOC).

The following tables summarize the netting project and includes all emissions units at the Bay West Paper Corporation and Mosinee Holdings Inc. facility that are being used to demonstrate a significant emissions increase and a significant net emission increase of PE, PM10, SO<sub>2</sub>, NOx, VOC, and CO does not occur as a result of the Plant Expansion Project:

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Bay V

PTI A

Issued: 12/13/2005

Emissions Unit ID: B001

**Table I. Sum of the baseline actual emissions by pollutant for each existing emissions unit in accordance with OAC rule 3745-31-01(O)**

Existing Sources		PE (TPY)	PM10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)
P101	Paper Machine #1, drying hoods	0.27	1.06	0.08	13.96	0.72	11.67
P102	Paper Machine #2, drying hoods						
P101	Paper Machine #1, off-line wire/felt cleaning					12.52	
P102	Paper Machine #2, off-line wire/felt cleaning						
P101	Paper Machine #1, paper making only					25.50	
P102	Paper Machine #2, paper making only						
P103	Natural De-Inking					26.13	
P104	Bleach De-Inking						
B001	Boiler #1	31.14	26.51	1051.16	760.23	2.03	17.38
B002	Boiler #2						
B003	Boiler #3						
B004	Boiler #4						
<b>Total Baseline Actual Emissions (TPY)</b>		<b>31.41</b>	<b>27.57</b>	<b>1051.24</b>	<b>774.19</b>	<b>66.90</b>	<b>29.05</b>

**Table II. Sum of the future potential to emit (permit allowable) by pollutant for each existing and new emissions unit in accordance with OAC rule 3745-31-01(III) - Post issuance of PTI 14-05736**

Existing Sources		PE (TPY)	PM10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)
P101	Paper Machine #1, drying hoods	0.78	0.89	0.07	39.9	0.64	9.81
P102	Paper Machine #2, drying hoods	0.78	0.89	0.07		0.64	9.81
P101	Paper Machine #1, off-line wire/felt cleaning					26.0	
P102	Paper Machine #2, off-line wire/felt cleaning						
P101	Paper Machine #1, paper making only					45.70*	
P102	Paper Machine #2, paper making only						
P103	Natural De-Inking						
P104	Bleach De-Inking						
B001	Boiler #1	31.80	31.81	998.42	607.74	1.66	14.04
B002	Boiler #2						
B003	Boiler #3						

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B004	Boiler #4						
<b>New Sources</b>							
P105	De-Inking #3 (*P101-P106 combined emissions)					*see above	
P106	Paper Machine #3, drying hoods	1.58	1.79	0.14	50.02	1.3	19.84
P106	Paper Machine #3, off-line wire/felt cleaning					26.0	
	P106 combined emissions)					*see above	

**Bay V****PTI A****Issued: 12/13/2005**

Emissions Unit ID: B001

B005	180 MMBTU/hr Gas and Oil-Fired Boiler	2.57	7.14	35	91.93	4.36	67.68
NA	Material storage tanks					0.19	
NA	Wastewater Treatment					0.36	
<b>Total Future Potential Emissions/Allowable Limits (TPY)</b>		<b>37.51</b>	<b>42.52</b>	<b>1033.70</b>	<b>789.59</b>	<b>106.85</b>	<b>121.18</b>

**Table III. Summary of the change in emissions by pollutant and comparison of the emission increases/decreases to major NSR thresholds**

	<b>PE (TPY)</b>	<b>PM10 (TPY)</b>	<b>SO2 (TPY)</b>	<b>NOx (TPY)</b>	<b>VOC (TPY)</b>	<b>CO (TPY)</b>
Total Baseline Actual Emissions (TPY)	31.41	27.57	1051.24	774.19	66.90	29.05
Total Projected Future Emissions/Allowable Limits (TPY)	37.51	42.52	1033.7	789.59	106.85	121.18
<b>Total Project - Change in Emissions (TPY)</b>	<b>6.10</b>	<b>14.95</b>	<b>(17.54)</b>	<b>15.40</b>	<b>39.95</b>	<b>92.13</b>
Contemporaneous creditable increases/decreases (TPY)	0	0	0	0	0	0
<b>Total Project - Net Emissions Increase/Decrease (TPY)</b>	<b>6.10</b>	<b>14.95</b>	<b>(17.54)*</b>	<b>15.40</b>	<b>39.95</b>	<b>92.13</b>
<b>PSD/NNSR Significant Emissions Level (TPY)</b>	<b>25</b>	<b>15</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>100</b>

\* This number represents a decrease.

**B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
B001 - Boiler No. 1 - 95 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification	OAC rule 3745-31-02(A)(2) Voluntary Restriction to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration	See terms and conditions A.I.2.a, A.I.2.b, A.I.2.c, A.II.2, and A.II.3.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pounds per MMBTU of actual heat input when burning No. 2 fuel oil.
	OAC rule 3745-17-10(C)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-02(A)(2).
	OAC rule 3745-18-15(F)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 1.4 pounds per MMBTU of actual heat input.
		See term and conditions A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** This emissions unit shall not exceed the following Particulate Emissions (PE) and Particulate Matter less than 10 microns (PM10) emission limitations, in pounds per MMBTU, when burning coal, in combination with the stated annual coal usage rates:
- i. 0.04 pounds PE/PM10 per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage; or
  - ii. 0.06 pounds PE/PM10 per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage.

The permittee has existing records to demonstrate compliance with the coal use limits upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

- 2.b** The maximum total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

31.80 tons per year Particulate emissions (PE);  
31.81 tons per year Particulate Matter less than 10 microns (PM10);  
998.42 tons per year Sulfur dioxide (SO<sub>2</sub>);  
607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);  
1.66 tons per year Volatile Organic Compounds (VOC);  
14.04 tons per year Carbon Monoxide (CO); and  
0.66 tons per year Hydrogen Chloride (HCl).

- 2.c** The permittee shall operate the cyclone and venturi scrubber at all times when this emissions unit is in operation.
- 2.d** This emissions unit shall be vented to a stack no lower than two hundred feet above ground level.
- 2.e** Compliance with OAC rule 3745-31-02(A)(2) shall be demonstrated by the emission limitations, the use of cyclone and scrubber control equipment, and annual fuel usage restrictions.

## II. Operational Restrictions

1. The permittee shall burn only coal or No. 2 fuel oil in this emissions unit.
2. The maximum annual No. 2 fuel oil usage rate for emissions units B001, B002, B003, and B004, combined, shall not exceed 100,000 gallons per year, based upon a rolling, 12-month summation of fuel oil usage. The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly fuel oil usage amounts are not necessary.
3. The annual ton per year emission limitations specified in Section A.I.2.b. above for SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 55,140 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.i. and the No.2 fuel oil restriction in Section A.II.2. above.

The annual ton per year emission limitations specified in Section A.I.2.b. above for PE and PM<sub>10</sub> are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 41,400 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.ii. and the No.2 fuel oil restriction in Section A.II.2. above.

The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

4. The quality of coal received for burning in this emissions unit shall have a combination of sulfur content and heat content, on an "as-received" wet basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
5. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of heat and sulfur content, on an "as-received" basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
6. When this emissions unit is in operation:
  - a. the pressure drop across the scrubber shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than 8 inches of water; and

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- b. the scrubber water flow rate shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than the minimum water flow rate (in gallons per minute) established during the most recent emissions test that demonstrated the emissions unit to be in compliance.
7. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.

### **III. Monitoring and/or Recordkeeping Requirements**

1. For each day during which the permittee burns a fuel other than coal or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect a representative sample of coal received for burning each month. The coal sampling shall be performed as follows:

On each day this emissions unit is in operation, the permittee shall collect a sample (approximately 0.33 cubic foot of coal) from the coal handling system at a point after the coal exits the crusher. The permittee shall pour the daily sample into a sample container and mix the sample with the previous days' sample(s). At the end of each week, the permittee shall again mix the sample container and collect and retain approximately 0.5 cubic foot of coal from the sample container in a sample bag. At the end of each month, the permittee shall pour each weekly sample bag into a sample container and mix the contents, then collect approximately 0.5 cubic foot of the mixed coal for laboratory testing.

Each monthly representative sample of coal shall be analyzed for sulfur content (percent), ash content (percent), and heat content (Btu/pound of coal). The analytical methods to be used to determine the ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865 Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

3. The permittee shall maintain monthly records of the total quantity of coal received, the results of the analyses for sulfur content, ash content, and heat content, and the calculated average SO<sub>2</sub> emission rate for the month, in lbs/MMBTU of actual heat input. The SO<sub>2</sub> emission rate shall be calculated by methods specified in OAC rule 3745-18-04(F)(1).

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4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBTU). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.
5. The permittee shall properly install, operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall collect and record the following information each day when burning coal:
  - a. the pressure drop across the scrubber, in inches of water, on a once per shift basis;
  - b. the scrubber water flow rate, in gallons per minute, on a once per shift basis.
6. The permittee shall maintain monthly records for this emissions unit that indicate which PE/PM10 lb/MMBTU emission limitation the permittee has elected to demonstrate compliance as specified in Section A.1.2.a.
7. The permittee shall collect and record the following information each month for emissions units B001, B002, B003, and B004 combined:
  - a. the total amount of coal used, in tons per month;
  - b. the updated rolling, 12-month summation of coal usage, in tons (the total amount of tons for the current month plus the total amount of tons for the previous eleven calendar months);
  - c. the total amount of No.2 fuel oil used, in gallons per month;
  - d. the updated rolling, 12-month summation of fuel oil usage, in gallons (the total amount of gallons for the current month plus the total amount of gallons for the previous eleven calendar months);
  - e. the total emissions, in tons, for PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl for

each month; and

- f. the updated rolling, 12-month summation emissions total, in tons, for PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than coal or No. 2 fuel oil. The notification shall include a copy of such record and shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
2. The permittee shall submit, on a quarterly basis, a report that identifies which PE/PM10 lb/MMBTU emission limitation, as specified in Section A.I.2.a, the permittee has elected to demonstrate compliance during the previous calendar quarter. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall state the elected emission limitations during the previous calendar quarter and the update 12-month rolling summation of coal usage.
3. The permittee shall submit quarterly reports concerning the quantity and quality of coal received for burning in this emissions unit. These reports shall include the following information for the emissions unit for each calendar month during the calendar quarter:
  - a. the total quantity of coal received (tons);
  - b. the average ash content (percent by weight) of the coal received;
  - c. the average sulfur content (percent by weight) of the coal received;
  - d. the average heat content (Btu/pound) of the coal received; and
  - e. the average sulfur dioxide emissions rate (pounds sulfur dioxide/mmBtu actual heat input) from the coal received.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the coal received during the previous calendar quarter.

4. The permittee shall submit, on a quarterly basis, copies or summaries of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this

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emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent), heat content (Btu/gallon), and SO<sub>2</sub> emission rate (pounds/MMBTU) for each shipment of oil. The total quantity of oil received in each shipment (gallons) shall also be included with the copies or summaries of the permittee's or oil supplier's analyses.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the oil shipments received during the previous calendar quarter.

5. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at the levels required in this permit:
  - a. the static pressure drop across the scrubber; and
  - b. the scrubber water flow rate.
6. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the rolling, 12-month coal usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.a. and Section A.II.3;
  - b. an identification of all exceedances of the rolling, 12-month No. 2 fuel oil usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.II.2; and
  - c. an identification of all exceedances of the rolling, 12-month emission limitations for PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.b.
7. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
8. The permittee shall submit annual reports which specify the total PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

## V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:  
PE shall not exceed 0.020 pound per MMBTU of actual heat input when firing No. 2 fuel oil.

Applicable Compliance Method:

Compliance may be determined by multiplying an emission factor of 2.0 lbs of particulates/1000 gallons of oil fired by the emissions unit's maximum hourly fuel oil firing capacity (in 1000gallons/hr) and dividing by the emissions unit's rated heat input capacity (95 MMBTU/hr). This emission factor is specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (9/98).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- b. Emission Limitation:  
Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1.4 lbs/mmBtu.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above SO<sub>2</sub> emission limitation based on the monitoring and record keeping requirements in Section A.III.2, A.III.3, and A.III.4 and the reporting requirements in Section A.IV.3 and A.IV.4 of this permit. The SO<sub>2</sub> emission rate shall be calculated pursuant to the equation specified in OAC rule 3745-18-04(F). When multiple fuels are burned, the SO<sub>2</sub> emission rate is the sum of SO<sub>2</sub> from all fuels burned divided by the sum of the Btu value of all fuels burned.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

- c. Emission Limitation:  
Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be

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determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

d. Emission Limitations(s):

The total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following as rolling, 12-month summations:

31.80 tons per year PE;

31.81 tons per year Particulate Matter less than 10 microns (PM10);

998.42 tons per year SO<sub>2</sub>;

607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);

1.66 tons per year Volatile Organic Compounds (VOC);

14.04 tons per year Carbon Monoxide (CO); and

0.66 tons per year Hydrogen Chloride (HCl).

Applicable Compliance Method:

Compliance with the SO<sub>2</sub>, VOC, and CO emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.7 and the pollutant-specific emission factors specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Chapter 1 External Combustion Sources, Sections 1.1 and 1.3 (9/98). Compliance with the PE and PM10 emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.1.e of this permit. Compliance with the NO<sub>x</sub> and HCl emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.2 of this permit.

e. Emission limitation(s):

When burning coal:

0.04 pounds PE/PM10 per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

0.06 pounds PE/PM10 per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted within 3 months after startup of any of the following new emission units, B005, P105, and P106 identified in this permit to install.

- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates of 0.04 lbs PE/PM10 per MMBTU or 0.06 lbs PE/PM10 per MMBTU of actual heat input, when burning coal. The permittee shall identify which emission limit has been elected to demonstrate compliance.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate:  
  
40 CFR Part 60, Appendix A, Methods 1 through 5, and Method 202  
  
If the permittee demonstrates to the appropriate Ohio EPA District Office or local air agency that Method 202 for determination of PM10 emissions is not technically feasible due to the stack conditions of this emissions unit, the permittee shall demonstrate compliance with the PM10 allowable mass emissions rate through the appropriate PM10 emission factors based on USEPA AP-42 guidance documents.
- iv. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- v. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. The "Intent to Test" notification shall also include which emission limit has been elected to demonstrate compliance and the updated 12-month rolling coal usage for emission units B001-B004, combined, in tons per year. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire

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data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the rolling 12-month coal usage restriction shall be determined by the record keeping requirements specified in Section A.III.7.

**2. Emission testing requirements**

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after startup of any of the following new emissions units, B005, P105, and P106 identified in this permit to install.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate for NO<sub>x</sub> and HCl.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

For NO<sub>x</sub>: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 7

For HCl: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 26

Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

- d. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the

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Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

3. Compliance with the rolling 12-month No. 2 fuel oil usage restriction specified in Section A.II.2 shall be determined by the record keeping requirements specified in Section A.III.7.
4. Compliance with the rolling 12-month coal usage restriction specified in Section A.I.2.a and A.II.3 shall be determined by the record keeping requirements specified in Section A.III.7.

**VI. Miscellaneous Requirements**

1. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM<sub>2.5</sub>. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005, regarding how to address PM<sub>2.5</sub> during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM<sub>10</sub> was considered a surrogate for PM<sub>2.5</sub>. Since the PM<sub>10</sub> emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM<sub>10</sub> and PM<sub>2.5</sub>.

**B. State Only Enforceable Section**

**I. 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>
Boiler No. 1 - 95 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

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

- 1. The permit to install for this emissions unit (B001) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

Pollutant: isopropanol  
TLV (ug/m3): 491,534

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Maximum Hourly Emission Rate (lbs/hr): 2.05  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51  
MAGLC (ug/m3): 11,703

Pollutant: ammonia  
TLV (ug/m3): 17,413  
Maximum Hourly Emission Rate (lbs/hr): 1.93  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37  
MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above

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changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. 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>
B002 - Boiler No. 2 - 95 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification	OAC rule 3745-31-02(A)(2) Voluntary Restriction to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-17-10(C)(1)
	OAC rule 3745-18-15(F)

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Applicable Emissions  
Limitations/Control  
Measures

See terms and conditions  
A.I.2.a, A.I.2.b, A.I.2.c,  
A.II.2, and A.II.3.

Visible particulate  
emissions from any stack  
shall not exceed 20  
percent opacity, as a  
six-minute average,  
except as specified by  
rule.

Particulate emissions  
(PE) shall not exceed  
0.020 pounds per  
MMBTU of actual heat  
input when burning No. 2  
fuel oil.

The emission limitation  
specified by this rule is  
less stringent than the  
emission limitation  
established pursuant to  
OAC rule  
3745-31-02(A)(2).

Sulfur dioxide (SO<sub>2</sub>)  
emissions shall not  
exceed 1.4 pounds per  
MMBTU of actual heat

input.

See term and conditions A.I.2.d.

**Bay West Paper Corp. and Mosinee Holdings Inc.**  
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**Issue**

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**2. Additional Terms and Conditions**

- 2.a** This emissions unit shall not exceed the following Particulate Emissions (PE) and Particulate Matter less than 10 microns (PM10) emission limitations, in pounds per MMBTU, when burning coal, in combination with the stated annual coal usage rates:
- i. 0.04 pounds PE/PM10 per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage; or
  - ii. 0.06 pounds PE/PM10 per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage.

The permittee has existing records to demonstrate compliance with the coal use upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

- 2.b** The maximum total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

31.80 tons per year Particulate emissions (PE);  
31.81 tons per year Particulate Matter less than 10 microns (PM10);  
998.42 tons per year Sulfur dioxide (SO<sub>2</sub>);  
607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);  
1.66 tons per year Volatile Organic Compounds (VOC);  
14.04 tons per year Carbon Monoxide (CO); and  
0.66 tons per year Hydrogen Chloride (HCl).

- 2.c** The permittee shall operate the cyclone and venturi scrubber at all times when this emissions unit is in operation.
- 2.d** This emissions unit shall be vented to a stack no lower than two hundred feet above ground level.
- 2.e** Compliance with OAC rule 3745-31-02(A)(2) shall be demonstrated by the emission limitations, the use of cyclone and scrubber control equipment, and annual fuel usage restrictions.

## II. Operational Restrictions

1. The permittee shall burn only coal or No. 2 fuel oil in this emissions unit.
2. The maximum annual No. 2 fuel oil usage rate for emissions units B001, B002, B003, and B004, combined, shall not exceed 100,000 gallons per year, based upon a rolling, 12-month summation of fuel oil usage. The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly fuel oil usage amounts are not necessary.
3. The annual ton per year emission limitations specified in Section A.I.2.b. above for SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 55,140 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.i. and the No.2 fuel oil restriction in Section A.II.2. above.

The annual ton per year emission limitations specified in Section A.I.2.b. above for PE and PM<sub>10</sub> are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 41,400 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.ii. and the No.2 fuel oil restriction in Section A.II.2. above.

The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

4. The quality of coal received for burning in this emissions unit shall have a combination of sulfur content and heat content, on an "as-received" wet basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
5. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of heat and sulfur content, on an "as-received" basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
6. When this emissions unit is in operation:
  - a. the pressure drop across the scrubber shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than 8 inches of water; and

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- b. the scrubber water flow rate shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than the minimum water flow rate (in gallons per minute) established during the most recent emissions test that demonstrated the emissions unit to be in compliance.
7. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.

### III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than coal or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect a representative sample of coal received for burning each month. The coal sampling shall be performed as follows:

On each day this emissions unit is in operation, the permittee shall collect a sample (approximately 0.33 cubic foot of coal) from the coal handling system at a point after the coal exits the crusher. The permittee shall pour the daily sample into a sample container and mix the sample with the previous days' sample(s). At the end of each week, the permittee shall again mix the sample container and collect and retain approximately 0.5 cubic foot of coal from the sample container in a sample bag. At the end of each month, the permittee shall pour each weekly sample bag into a sample container and mix the contents, then collect approximately 0.5 cubic foot of the mixed coal for laboratory testing.

Each monthly representative sample of coal shall be analyzed for sulfur content (percent), ash content (percent), and heat content (Btu/pound of coal). The analytical methods to be used to determine the ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865 Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

3. The permittee shall maintain monthly records of the total quantity of coal received, the results of the analyses for sulfur content, ash content, and heat content, and the calculated average SO<sub>2</sub> emission rate for the month, in lbs/MMBTU of actual heat input. The SO<sub>2</sub> emission rate shall be calculated by methods specified in OAC rule 3745-18-04(F)(1).

4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBTU). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).  
The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.
5. The permittee shall properly install, operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.  
The permittee shall collect and record the following information each day when burning coal:
  - a. the pressure drop across the scrubber, in inches of water, on a once per shift basis;
  - b. the scrubber water flow rate, in gallons per minute, on a once per shift basis.
6. The permittee shall maintain monthly records for this emissions unit that indicate which PE/PM10 lb/MMBTU emission limitation the permittee has elected to demonstrate compliance as specified in Section A.I.2.a.
7. The permittee shall collect and record the following information each month for emissions units B001, B002, B003, and B004 combined:
  - a. the total amount of coal used, in tons per month;
  - b. the updated rolling, 12-month summation of coal usage, in tons (the total amount of tons for the current month plus the total amount of tons for the previous eleven calendar months);
  - c. the total amount of No.2 fuel oil used, in gallons per month;

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- d. the updated rolling, 12-month summation of fuel oil usage, in gallons (the total amount of gallons for the current month plus the total amount of gallons for the previous eleven calendar months);
- e. the total emissions, in tons, for PE, PM10, SO2, NOx, VOC, CO, and HCl for each month; and
- f. the updated rolling, 12-month summation emissions total, in tons, for PE, PM10, SO2, NOx, VOC, CO, and HCl (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than coal or No. 2 fuel oil. The notification shall include a copy of such record and shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
2. The permittee shall submit, on a quarterly basis, a report that identifies which PE/PM10 lb/MMBTU emission limitation, as specified in Section A.I.2.a, the permittee has elected to demonstrate compliance during the previous calendar quarter. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall state the elected emission limitations during the previous calendar quarter and the update 12-month rolling summation of coal usage.
3. The permittee shall submit quarterly reports concerning the quantity and quality of coal received for burning in this emissions unit. These reports shall include the following information for the emissions unit for each calendar month during the calendar quarter:
  - a. the total quantity of coal received (tons);
  - b. the average ash content (percent by weight) of the coal received;
  - c. the average sulfur content (percent by weight) of the coal received;
  - d. the average heat content (Btu/pound) of the coal received; and
  - e. the average sulfur dioxide emissions rate (pounds sulfur dioxide/mmBtu actual heat input) from the coal received.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the coal received during the previous calendar quarter.

4. The permittee shall submit, on a quarterly basis, copies or summaries of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur

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content (percent), heat content (Btu/gallon), and SO<sub>2</sub> emission rate (pounds/MMBTU) for each shipment of oil. The total quantity of oil received in each shipment (gallons) shall also be included with the copies or summaries of the permittee's or oil supplier's analyses.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the oil shipments received during the previous calendar quarter.

5. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at the levels required in this permit:
  - a. the static pressure drop across the scrubber; and
  - b. the scrubber water flow rate.
  
6. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the rolling, 12-month coal usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.a. and Section A.II.3;
  - b. an identification of all exceedances of the rolling, 12-month No. 2 fuel oil usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.II.2; and
  - c. an identification of all exceedances of the rolling, 12-month emission limitations for PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.b.
  
7. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
  
8. The permittee shall submit annual reports which specify the total PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

## V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

PE shall not exceed 0.020 pound per MMBTU of actual heat input when firing No. 2 fuel oil.

**Applicable Compliance Method:**

Compliance may be determined by multiplying an emission factor of 2.0 lbs of particulates/1000 gallons of oil fired by the emissions unit's maximum hourly fuel oil firing capacity (in 1000gallons/hr) and dividing by the emissions unit's rated heat input capacity (95 MMBTU/hr). This emission factor is specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (9/98).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- b. Emission Limitation:

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1.4 lbs/mmBtu.

**Applicable Compliance Method:**

The permittee shall demonstrate compliance with the above SO<sub>2</sub> emission limitation based on the monitoring and record keeping requirements in Section A.III.2, A.III.3, and A.III.4 and the reporting requirements in Section A.IV.3 and A.IV.4 of this permit. The SO<sub>2</sub> emission rate shall be calculated pursuant to the equation specified in OAC rule 3745-18-04(F). When multiple fuels are burned, the SO<sub>2</sub> emission rate is the sum of SO<sub>2</sub> from all fuels burned divided by the sum of the Btu value of all fuels burned.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

- c. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

**Applicable Compliance Method:**

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance

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with 40 CFR Part 60, Appendix A, Test Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

d. Emission Limitations(s):

The total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following as rolling, 12-month summations:

31.80 tons per year PE;

31.81 tons per year Particulate Matter less than 10 microns (PM10);

998.42 tons per year SO<sub>2</sub>;

607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);

1.66 tons per year Volatile Organic Compounds (VOC);

14.04 tons per year Carbon Monoxide (CO); and

0.66 tons per year Hydrogen Chloride (HCl).

Applicable Compliance Method:

Compliance with the SO<sub>2</sub>, VOC, and CO emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.7 and the pollutant-specific emission factors specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Chapter 1 External Combustion Sources, Sections 1.1 and 1.3 (9/98). Compliance with the PE and PM10 emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.1.e of this permit. Compliance with the NO<sub>x</sub> and HCl emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.2 of this permit.

e. Emission limitation(s):

When burning coal:

0.04 pounds PE/PM10 per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

0.06 pounds PE/PM10 per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this

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emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted within 3 months after startup of any of the following new emission units, B005, P105, and P106 identified in this permit to install.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates of 0.04 lbs PE/PM10 per MMBTU or 0.06 lbs PE/PM10 per MMBTU of actual heat input, when burning coal. The permittee shall identify which emission limit has been elected to demonstrate compliance.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate:

40 CFR Part 60, Appendix A, Methods 1 through 5, and Method 202

If the permittee demonstrates to the appropriate Ohio EPA District Office or local air agency that Method 202 for determination of PM10 emissions is not technically feasible due to the stack conditions of this emissions unit, the permittee shall demonstrate compliance with the PM10 allowable mass emissions rate through the appropriate PM10 emission factors based on USEPA AP-42 guidance documents.

- iv. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- v. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. The "Intent to Test" notification shall also include which emission limit has been elected to demonstrate compliance and the updated 12-month rolling coal usage for emission units B001-B004, combined, in tons per year. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the

emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the rolling 12-month coal usage restriction shall be determined by the record keeping requirements specified in Section A.III.7.

**2. Emission testing requirements**

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after startup of any of the following new emissions units, B005, P105, and P106 identified in this permit to install.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate for NO<sub>x</sub> and HCl.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

For NO<sub>x</sub>: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 7

For HCl: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 26

Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

- d. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

3. Compliance with the rolling 12-month No. 2 fuel oil usage restriction specified in Section A.II.2 shall be determined by the record keeping requirements specified in Section A.III.7.
4. Compliance with the rolling 12-month coal usage restriction specified in Section A.I.2.a and A.II.3 shall be determined by the record keeping requirements specified in Section A.III.7.

## **VI. Miscellaneous Requirements**

1. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM<sub>2.5</sub>. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005, regarding how to address PM<sub>2.5</sub> during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM<sub>10</sub> was considered a surrogate for PM<sub>2.5</sub>. Since the PM<sub>10</sub> emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM<sub>10</sub> and PM<sub>2.5</sub>.

## B. State Only Enforceable Section

### I. 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>
Boiler No. 2 - 95 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification		See terms and conditions B.III.1.

### 2. Additional Terms and Conditions

#### 2.a None

### II. Operational Restrictions

None

### III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (B002) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

Pollutant: isopropanol  
 TLV (ug/m3): 491,534

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Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final

permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **IV. Reporting Requirements**

None

#### **V. Testing Requirements**

None

#### **VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
B003 - Boiler No. 3 - 95 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification	OAC rule 3745-31-02(A)(2) Voluntary Restriction to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration	See terms and conditions A.I.2.a, A.I.2.b, A.I.2.c, A.II.2, and A.II.3.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pounds per MMBTU of actual heat input when burning No. 2 fuel oil.
	OAC rule 3745-17-10(C)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-02(A)(2).
	OAC rule 3745-18-15(F)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 1.4 pounds per MMBTU of actual heat input.
		See term and conditions A.I.2.d.

## 2. Additional Terms and Conditions

- 2.a** This emissions unit shall not exceed the following Particulate Emissions (PE) and Particulate Matter less than 10 microns (PM10) emission limitations, in pounds per MMBTU, when burning coal, in combination with the stated annual coal usage rates:
- i. 0.04 pounds PE/PM10 per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage; or
  - ii. 0.06 pounds PE/PM10 per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage.

The permittee has existing records to demonstrate compliance with the coal use upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

- 2.b** The maximum total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

31.80 tons per year Particulate emissions (PE);  
31.81 tons per year Particulate Matter less than 10 microns (PM10);  
998.42 tons per year Sulfur dioxide (SO<sub>2</sub>);  
607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);  
1.66 tons per year Volatile Organic Compounds (VOC);  
14.04 tons per year Carbon Monoxide (CO); and  
0.66 tons per year Hydrogen Chloride (HCl).

- 2.c** The permittee shall operate the cyclone and venturi scrubber at all times when this emissions unit is in operation.
- 2.d** This emissions unit shall be vented to a stack no lower than two hundred feet above ground level.
- 2.e** Compliance with OAC rule 3745-31-02(A)(2) shall be demonstrated by the emission limitations, the use of cyclone and scrubber control equipment, and annual fuel usage restrictions.

## II. Operational Restrictions

1. The permittee shall burn only coal or No. 2 fuel oil in this emissions unit.
2. The maximum annual No. 2 fuel oil usage rate for emissions units B001, B002, B003, and B004, combined, shall not exceed 100,000 gallons per year, based upon a rolling, 12-month summation of fuel oil usage. The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly fuel oil usage amounts are not necessary.
3. The annual ton per year emission limitations specified in Section A.I.2.b. above for SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 55,140 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.i. and the No.2 fuel oil restriction in Section A.II.2. above.

The annual ton per year emission limitations specified in Section A.I.2.b. above for PE and PM<sub>10</sub> are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 41,400 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.ii. and the No.2 fuel oil restriction in Section A.II.2. above.

The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

4. The quality of coal received for burning in this emissions unit shall have a combination of sulfur content and heat content, on an "as-received" wet basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
5. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of heat and sulfur content, on an "as-received" basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
6. When this emissions unit is in operation:
  - a. the pressure drop across the scrubber shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than 8 inches of water; and
  - b. the scrubber water flow rate shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than the minimum water flow rate (in gallons per minute) established during the most recent emissions test that demonstrated the emissions unit to be in compliance.

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7. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.

### III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than coal or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect a representative sample of coal received for burning each month. The coal sampling shall be performed as follows:

On each day this emissions unit is in operation, the permittee shall collect a sample (approximately 0.33 cubic foot of coal) from the coal handling system at a point after the coal exits the crusher. The permittee shall pour the daily sample into a sample container and mix the sample with the previous days' sample(s). At the end of each week, the permittee shall again mix the sample container and collect and retain approximately 0.5 cubic foot of coal from the sample container in a sample bag. At the end of each month, the permittee shall pour each weekly sample bag into a sample container and mix the contents, then collect approximately 0.5 cubic foot of the mixed coal for laboratory testing.

Each monthly representative sample of coal shall be analyzed for sulfur content (percent), ash content (percent), and heat content (Btu/pound of coal). The analytical methods to be used to determine the ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865 Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

3. The permittee shall maintain monthly records of the total quantity of coal received, the results of the analyses for sulfur content, ash content, and heat content, and the calculated average SO<sub>2</sub> emission rate for the month, in lbs/MMBTU of actual heat input. The SO<sub>2</sub> emission rate shall be calculated by methods specified in OAC rule 3745-18-04(F)(1).
4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBTU). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

Emissions Unit ID: B003

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

5. The permittee shall properly install, operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall collect and record the following information each day when burning coal:
  - a. the pressure drop across the scrubber, in inches of water, on a once per shift basis;
  - b. the scrubber water flow rate, in gallons per minute, on a once per shift basis.
6. The permittee shall maintain monthly records for this emissions unit that indicate which PE/PM10 lb/MMBTU emission limitation the permittee has elected to demonstrate compliance as specified in Section A.1.2.a.
7. The permittee shall collect and record the following information each month for emissions units B001, B002, B003, and B004 combined:
  - a. the total amount of coal used, in tons per month;
  - b. the updated rolling, 12-month summation of coal usage, in tons (the total amount of tons for the current month plus the total amount of tons for the previous eleven calendar months);
  - c. the total amount of No.2 fuel oil used, in gallons per month;
  - d. the updated rolling, 12-month summation of fuel oil usage, in gallons (the total amount of gallons for the current month plus the total amount of gallons for the previous eleven calendar months);
  - e. the total emissions, in tons, for PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl for each month; and
  - f. the updated rolling, 12-month summation emissions total, in tons, for PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar

months).

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than coal or No. 2 fuel oil. The notification shall include a copy of such record and shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
2. The permittee shall submit, on a quarterly basis, a report that identifies which PE/PM10 lb/MMBTU emission limitation, as specified in Section A.1.2.a, the permittee has elected to demonstrate compliance during the previous calendar quarter. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall state the elected emission limitations during the previous calendar quarter and the update 12-month rolling summation of coal usage.
3. The permittee shall submit quarterly reports concerning the quantity and quality of coal received for burning in this emissions unit. These reports shall include the following information for the emissions unit for each calendar month during the calendar quarter:
  - a. the total quantity of coal received (tons);
  - b. the average ash content (percent by weight) of the coal received;
  - c. the average sulfur content (percent by weight) of the coal received;
  - d. the average heat content (Btu/pound) of the coal received; and
  - e. the average sulfur dioxide emissions rate (pounds sulfur dioxide/mmBtu actual heat input) from the coal received.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the coal received during the previous calendar quarter.

4. The permittee shall submit, on a quarterly basis, copies or summaries of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent), heat content (Btu/gallon), and SO<sub>2</sub> emission rate (pounds/MMBTU) for each shipment of oil. The total quantity of oil received in each shipment (gallons) shall also be included with the copies or summaries of the permittee's or oil supplier's analyses.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the oil shipments received during the previous calendar quarter.

5. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at the levels required in this permit:
  - a. the static pressure drop across the scrubber; and
  - b. the scrubber water flow rate.
6. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the rolling, 12-month coal usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.a. and Section A.II.3;
  - b. an identification of all exceedances of the rolling, 12-month No. 2 fuel oil usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.II.2; and
  - c. an identification of all exceedances of the rolling, 12-month emission limitations for PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.b.
7. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
8. The permittee shall submit annual reports which specify the total PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
PE shall not exceed 0.020 pound per MMBTU of actual heat input when firing No. 2 fuel oil.

**Applicable Compliance Method:**

Compliance may be determined by multiplying an emission factor of 2.0 lbs of particulates/1000 gallons of oil fired by the emissions unit's maximum hourly fuel oil firing capacity (in 1000gallons/hr) and dividing by the emissions unit's rated heat input capacity (95 MMBTU/hr). This emission factor is specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (9/98).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

**b. Emission Limitation:**

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1.4 lbs/mmBtu.

**Applicable Compliance Method:**

The permittee shall demonstrate compliance with the above SO<sub>2</sub> emission limitation based on the monitoring and record keeping requirements in Section A.III.2, A.III.3, and A.III.4 and the reporting requirements in Section A.IV.3 and A.IV.4 of this permit. The SO<sub>2</sub> emission rate shall be calculated pursuant to the equation specified in OAC rule 3745-18-04(F). When multiple fuels are burned, the SO<sub>2</sub> emission rate is the sum of SO<sub>2</sub> from all fuels burned divided by the sum of the Btu value of all fuels burned.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

**c. Emission Limitation:**

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

**Applicable Compliance Method:**

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**d. Emission Limitations(s):**

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The total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following as rolling, 12-month summations:

- 31.80 tons per year PE;
- 31.81 tons per year Particulate Matter less than 10 microns (PM10);
- 998.42 tons per year SO<sub>2</sub>;
- 607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);
- 1.66 tons per year Volatile Organic Compounds (VOC);
- 14.04 tons per year Carbon Monoxide (CO); and
- 0.66 tons per year Hydrogen Chloride (HCl).

**Applicable Compliance Method:**

Compliance with the SO<sub>2</sub>, VOC, and CO emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.7 and the pollutant-specific emission factors specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Chapter 1 External Combustion Sources, Sections 1.1 and 1.3 (9/98). Compliance with the PE and PM<sub>10</sub> emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.1.e of this permit. Compliance with the NO<sub>x</sub> and HCl emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.2 of this permit.

e. **Emission limitation(s):**

When burning coal:

0.04 pounds PE/PM<sub>10</sub> per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

0.06 pounds PE/PM<sub>10</sub> per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

**Applicable Compliance Method:**

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted within 3 months after startup of any of the following new emission units, B005, P105, and P106 identified in this permit to install.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates of 0.04 lbs PE/PM<sub>10</sub> per MMBTU or 0.06 lbs PE/PM<sub>10</sub> per MMBTU of actual heat input, when burning coal. The permittee shall identify which emission limit has been elected to

demonstrate compliance.

- iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate:

40 CFR Part 60, Appendix A, Methods 1 through 5, and Method 202

If the permittee demonstrates to the appropriate Ohio EPA District Office or local air agency that Method 202 for determination of PM10 emissions is not technically feasible due to the stack conditions of this emissions unit, the permittee shall demonstrate compliance with the PM10 allowable mass emissions rate through the appropriate PM10 emission factors based on USEPA AP-42 guidance documents.

- iv. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- v. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. The "Intent to Test" notification shall also include which emission limit has been elected to demonstrate compliance and the updated 12-month rolling coal usage for emission units B001-B004, combined, in tons per year. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the rolling 12-month coal usage restriction shall be determined by the record keeping requirements specified in Section A.III.7.

**2. Emission testing requirements**

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after startup of any of the following new emissions units, B005, P105, and P106 identified in this permit to install.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate for NO<sub>x</sub> and HCl.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

For NO<sub>x</sub>: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 7

For HCl: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 26

Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

- d. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be

permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

3. Compliance with the rolling 12-month No. 2 fuel oil usage restriction specified in Section A.II.2 shall be determined by the record keeping requirements specified in Section A.III.7.
4. Compliance with the rolling 12-month coal usage restriction specified in Section A.I.2.a and A.II.3 shall be determined by the record keeping requirements specified in Section A.III.7.

## **VI. Miscellaneous Requirements**

1. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM<sub>2.5</sub>. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005, regarding how to address PM<sub>2.5</sub> during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM<sub>10</sub> was considered a surrogate for PM<sub>2.5</sub>. Since the PM<sub>10</sub> emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM<sub>10</sub> and PM<sub>2.5</sub>.

## B. State Only Enforceable Section

### I. 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>
Boiler No. 3 - 95 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification		See terms and conditions B.III.1.

### 2. Additional Terms and Conditions

#### 2.a None

### II. Operational Restrictions

None

### III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (B003) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

Pollutant: isopropanol  
 TLV (ug/m3): 491,534

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Maximum Hourly Emission Rate (lbs/hr): 2.05  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51  
MAGLC (ug/m3): 11,703

Pollutant: ammonia  
TLV (ug/m3): 17,413  
Maximum Hourly Emission Rate (lbs/hr): 1.93  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37  
MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above

Emissions Unit ID: B003

changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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Emissions Unit ID: B004

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. 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>
B004 - Boiler No. 4 - 174 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification	OAC rule 3745-31-02(A)(2) Voluntary Restriction to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-17-10(C)(1)
	OAC rule 3745-18-15(F)

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**PTI A**

**Issued: 12/13/2005**

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Applicable Emissions  
Limitations/Control  
Measures

See terms and conditions A.I.2.a, A.I.2.b, A.I.2.c, A.II.2, and A.II.3.

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Particulate emissions (PE) shall not exceed 0.020 pounds per MMBTU of actual heat input when burning No. 2 fuel oil.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-02(A)(2).

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1.4 pounds per

MMBTU of actual heat input.

See term and conditions A.I.2.d.

**Bay West Paper Corp. and Mosinee Holdings Inc.**  
**PTI Application: 11-05726**  
**Issue**

**Facility ID: 1409010043**

Emissions Unit ID: B004

## 2. Additional Terms and Conditions

- 2.a** This emissions unit shall not exceed the following Particulate Emissions (PE) and Particulate Matter less than 10 microns (PM10) emission limitations, in pounds per MMBTU, when burning coal, in combination with the stated annual coal usage rates:
- i. 0.04 pounds PE/PM10 per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage; or
  - ii. 0.06 pounds PE/PM10 per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a rolling, 12-month summation of coal usage.

The permittee has existing records to demonstrate compliance with the coal use upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

- 2.b** The maximum total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

31.80 tons per year Particulate emissions (PE);  
31.81 tons per year Particulate Matter less than 10 microns (PM10);  
998.42 tons per year Sulfur dioxide (SO<sub>2</sub>);  
607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);  
1.66 tons per year Volatile Organic Compounds (VOC);  
14.04 tons per year Carbon Monoxide (CO); and  
0.66 tons per year Hydrogen Chloride (HCl).

- 2.c** The permittee shall operate the cyclone and venturi scrubber at all times when this emissions unit is in operation.
- 2.d** This emissions unit shall be vented to a stack no lower than two hundred feet above ground level.
- 2.e** Compliance with OAC rule 3745-31-02(A)(2) shall be demonstrated by the emission limitations, the use of cyclone and scrubber control equipment, and annual fuel usage restrictions.

## II. Operational Restrictions

1. The permittee shall burn only coal or No. 2 fuel oil in this emissions unit.
2. The maximum annual No. 2 fuel oil usage rate for emissions units B001, B002, B003, and B004, combined, shall not exceed 100,000 gallons per year, based upon a rolling, 12-month summation of fuel oil usage. The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly fuel oil usage amounts are not necessary.
3. The annual ton per year emission limitations specified in Section A.I.2.b. above for SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 55,140 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.i. and the No.2 fuel oil restriction in Section A.II.2. above.

The annual ton per year emission limitations specified in Section A.I.2.b. above for PE and PM<sub>10</sub> are worst case based upon a maximum annual coal usage rate for emissions units B001, B002, B003, and B004, combined, of 41,400 tons per year as a rolling, 12-month summation of coal usage when using the pound per MMBTU value listed in term A.I.2.a.ii. and the No.2 fuel oil restriction in Section A.II.2. above.

The permittee has existing records to demonstrate compliance upon issuance of this permit, therefore first year monthly coal usage amounts are not necessary.

4. The quality of coal received for burning in this emissions unit shall have a combination of sulfur content and heat content, on an "as-received" wet basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
5. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of heat and sulfur content, on an "as-received" basis, which is sufficient to comply with the allowable sulfur dioxide emission limitation.
6. When this emissions unit is in operation:
  - a. the pressure drop across the scrubber shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than 8 inches of water; and

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- b. the scrubber water flow rate shall be continuously monitored and maintained, at all times the emissions unit is in operation, at a value of not less than the minimum water flow rate (in gallons per minute) established during the most recent emissions test that demonstrated the emissions unit to be in compliance.
7. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.

### III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than coal or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect a representative sample of coal received for burning each month. The coal sampling shall be performed as follows:

On each day this emissions unit is in operation, the permittee shall collect a sample (approximately 0.33 cubic foot of coal) from the coal handling system at a point after the coal exits the crusher. The permittee shall pour the daily sample into a sample container and mix the sample with the previous days' sample(s). At the end of each week, the permittee shall again mix the sample container and collect and retain approximately 0.5 cubic foot of coal from the sample container in a sample bag. At the end of each month, the permittee shall pour each weekly sample bag into a sample container and mix the contents, then collect approximately 0.5 cubic foot of the mixed coal for laboratory testing.

Each monthly representative sample of coal shall be analyzed for sulfur content (percent), ash content (percent), and heat content (Btu/pound of coal). The analytical methods to be used to determine the ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865 Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

3. The permittee shall maintain monthly records of the total quantity of coal received, the results of the analyses for sulfur content, ash content, and heat content, and the calculated average SO<sub>2</sub> emission rate for the month, in lbs/MMBTU of actual heat input. The SO<sub>2</sub> emission rate shall be calculated by methods specified in OAC rule 3745-18-04(F)(1).

4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBTU). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).  
The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.
5. The permittee shall properly install, operate, and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.  
The permittee shall collect and record the following information each day when burning coal:
  - a. the pressure drop across the scrubber, in inches of water, on a once per shift basis;
  - b. the scrubber water flow rate, in gallons per minute, on a once per shift basis.
6. The permittee shall maintain monthly records for this emissions unit that indicate which PE/PM10 lb/MMBTU emission limitation the permittee has elected to demonstrate compliance as specified in Section A.I.2.a.
7. The permittee shall collect and record the following information each month for emissions units B001, B002, B003, and B004 combined:
  - a. the total amount of coal used, in tons per month;
  - b. the updated rolling, 12-month summation of coal usage, in tons (the total amount of tons for the current month plus the total amount of tons for the previous eleven calendar months);

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- c. the total amount of No.2 fuel oil used, in gallons per month;
- d. the updated rolling, 12-month summation of fuel oil usage, in gallons (the total amount of gallons for the current month plus the total amount of gallons for the previous eleven calendar months);
- e. the total emissions, in tons, for PE, PM10, SO2, NOx, VOC, CO, and HCl for each month; and
- f. the updated rolling, 12-month summation emissions total, in tons, for PE, PM10, SO2, NOx, VOC, CO, and HCl (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

#### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than coal or No. 2 fuel oil. The notification shall include a copy of such record and shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
2. The permittee shall submit, on a quarterly basis, a report that identifies which PE/PM10 lb/MMBTU emission limitation, as specified in Section A.1.2.a, the permittee has elected to demonstrate compliance during the previous calendar quarter. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall state the elected emission limitations during the previous calendar quarter and the update 12-month rolling summation of coal usage.
3. The permittee shall submit quarterly reports concerning the quantity and quality of coal received for burning in this emissions unit. These reports shall include the following information for the emissions unit for each calendar month during the calendar quarter:
  - a. the total quantity of coal received (tons);
  - b. the average ash content (percent by weight) of the coal received;
  - c. the average sulfur content (percent by weight) of the coal received;
  - d. the average heat content (Btu/pound) of the coal received; and
  - e. the average sulfur dioxide emissions rate (pounds sulfur dioxide/mmBtu actual heat input) from the coal received.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the coal received during the previous calendar quarter.

4. The permittee shall submit, on a quarterly basis, copies or summaries of the permittee's

or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent), heat content (Btu/gallon), and SO<sub>2</sub> emission rate (pounds/MMBTU) for each shipment of oil. The total quantity of oil received in each shipment (gallons) shall also be included with the copies or summaries of the permittee's or oil supplier's analyses.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year to Hamilton County Department of Environmental Services and shall cover the oil shipments received during the previous calendar quarter.

5. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at the levels required in this permit:
  - a. the static pressure drop across the scrubber; and
  - b. the scrubber water flow rate.
6. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the rolling, 12-month coal usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.a. and Section A.II.3;
  - b. an identification of all exceedances of the rolling, 12-month No. 2 fuel oil usage limitation for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.II.2; and
  - c. an identification of all exceedances of the rolling, 12-month emission limitations for PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO, and HCl for emissions unit B001, B002, B003, and B004, combined, as specified in Section A.I.2.b.
7. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
8. The permittee shall submit annual reports which specify the total PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO emissions from this emissions unit for the previous calendar year.

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These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

## V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:  
PE shall not exceed 0.020 pound per MMBTU of actual heat input when firing No. 2 fuel oil.

Applicable Compliance Method:

Compliance may be determined by multiplying an emission factor of 2.0 lbs of particulates/1000 gallons of oil fired by the emissions unit's maximum hourly fuel oil firing capacity (in 1000gallons/hr) and dividing by the emissions unit's rated heat input capacity (95 MMBTU/hr). This emission factor is specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (9/98).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- b. Emission Limitation:  
Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1.4 lbs/mmBtu.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above SO<sub>2</sub> emission limitation based on the monitoring and record keeping requirements in Section A.III.2, A.III.3, and A.III.4 and the reporting requirements in Section A.IV.3 and A.IV.4 of this permit. The SO<sub>2</sub> emission rate shall be calculated pursuant to the equation specified in OAC rule 3745-18-04(F). When multiple fuels are burned, the SO<sub>2</sub> emission rate is the sum of SO<sub>2</sub> from all fuels burned divided by the sum of the Btu value of all fuels burned.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

- c. Emission Limitation:  
Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

d. Emission Limitations(s):

The total annual emissions from emissions units B001, B002, B003, and B004, combined, shall not exceed the following as rolling, 12-month summations:

31.80 tons per year PE;  
31.81 tons per year Particulate Matter less than 10 microns (PM10);  
998.42 tons per year SO<sub>2</sub>;  
607.74 tons per year Nitrogen Oxides (NO<sub>x</sub>);  
1.66 tons per year Volatile Organic Compounds (VOC);  
14.04 tons per year Carbon Monoxide (CO); and  
0.66 tons per year Hydrogen Chloride (HCl).

Applicable Compliance Method:

Compliance with the SO<sub>2</sub>, VOC, and CO emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.7 and the pollutant-specific emission factors specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Chapter 1 External Combustion Sources, Sections 1.1 and 1.3 (9/98). Compliance with the PE and PM<sub>10</sub> emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.1.e of this permit. Compliance with the NO<sub>x</sub> and HCl emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and emission testing required in Section A.V.2 of this permit.

e. Emission limitation(s):

When burning coal:

0.04 pounds PE/PM<sub>10</sub> per MMBTU, based upon 55,140 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

0.06 pounds PE/PM<sub>10</sub> per MMBTU, based upon 41,400 tons per year of coal use in emissions units B001, B002, B003, and B004, combined, as a 12-month rolling summation of coal usage

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted within 3 months after startup of any of the following new emission units, B005, P105, and P106 identified in this permit to install.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates of 0.04 lbs PE/PM10 per MMBTU or 0.06 lbs PE/PM10 per MMBTU of actual heat input, when burning coal. The permittee shall identify which emission limit has been elected to demonstrate compliance.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate:

40 CFR Part 60, Appendix A, Methods 1 through 5, and Method 202

If the permittee demonstrates to the appropriate Ohio EPA District Office or local air agency that Method 202 for determination of PM10 emissions is not technically feasible due to the stack conditions of this emissions unit, the permittee shall demonstrate compliance with the PM10 allowable mass emissions rate through the appropriate PM10 emission factors based on USEPA AP-42 guidance documents.

- iv. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- v. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. The "Intent to Test" notification shall also include which emission limit has been elected to demonstrate compliance and the updated 12-month rolling coal usage for emission units B001-B004, combined, in tons per year. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the rolling 12-month coal usage restriction shall be determined by the record keeping requirements specified in Section A.III.7.

**2. Emission testing requirements**

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after startup of any of the following new emissions units, B005, P105, and P106 identified in this permit to install.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate for NO<sub>x</sub> and HCl.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

For NO<sub>x</sub>: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 7

For HCl: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 26

Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

- d. During the test, the pressure drop and water flow rate of the venturi scrubber shall be recorded at least every 15 minutes.
- e. The test shall be conducted while the emissions unit is operating at or near its

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maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

3. Compliance with the rolling 12-month No. 2 fuel oil usage restriction specified in Section A.II.2 shall be determined by the record keeping requirements specified in Section A.III.7.
4. Compliance with the rolling 12-month coal usage restriction specified in Section A.I.2.a and A.II.3 shall be determined by the record keeping requirements specified in Section A.III.7.

## **VI. Miscellaneous Requirements**

1. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM<sub>2.5</sub>. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005, regarding how to address PM<sub>2.5</sub> during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM<sub>10</sub> was considered a surrogate for PM<sub>2.5</sub>. Since the PM<sub>10</sub> emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM<sub>10</sub> and PM<sub>2.5</sub>.

**B. State Only Enforceable Section**

**I. 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>
Boiler No. 4 - 174 MMBTU/hr coal/No. 2 oil-fired boiler with cyclone and scrubber - Modification		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

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

- 1. The permit to install for this emissions unit (B004) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

Pollutant: isopropanol  
TLV (ug/m3): 491,534

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Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final

permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **IV. Reporting Requirements**

None

#### **V. Testing Requirements**

None

#### **VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
B005 - 180 MMBTU/hour natural gas and No. 2 oil-fired boiler with low NOx burners	OAC rule 3745-31-05(A)(3)

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	OAC rule 3745-18-06(D)	<u>Applicable Emissions Limitations/Control Measures</u>
<p>OAC rule 3745-31-05(C) Synthetic Minor to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration</p> <p>40 CFR Part 60 Subpart Db New Source Performance Standard (NSPS)</p>	<p>OAC rule 3745-21-08(B)</p> <p>OAC rule 3745-23-06(B)</p>	<p>When burning natural gas:</p> <p>Particulate emissions (PE) shall not exceed 0.002 lb/MMBTU of actual heat input*.</p> <p>Particulate Matter less than 10 microns (PM10) emissions shall not exceed 0.007 lb/MMBTU of actual heat input*.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/MMBTU of actual heat input*.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/MMBTU of actual heat input.</p> <p>Volatile Organic Compounds (VOC) emissions shall not exceed 0.005 lb/MMBTU of actual heat input*.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.08 lb/MMBTU of actual heat input*.</p>
<p>OAC rule 3745-17-07(A)(1)</p>		<p>When burning No.2 fuel oil:</p>
<p>OAC rule 3745-17-10(B)(1)</p>		<p>Particulate emissions (PE) shall not exceed 0.014 lb/MMBTU of actual heat input*.</p> <p>Particulate Matter emissions less than 10 microns (PM10) shall not exceed 0.016 lb/MMBTU of actual heat input*.</p>

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Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.45 lb/MMBTU of actual heat input.

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.17 lb/MMBTU of actual heat input.

Volatile Organic Compounds (VOC) emissions shall not exceed 0.001 lb/MMBTU of actual heat input\*.

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBTU of actual heat input\*.

\*The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-05(C) and 40 CFR Part 60 Subpart Db.

See terms and conditions A.I.2.a. and A.II.4.

See terms and conditions A.I.2.b. and A.II.5.

The SO<sub>2</sub> and NO<sub>x</sub> lb/MMBTU emission limitations specified by this rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60 Subpart Db.

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

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

See terms and conditions A.I.2.e.

See terms and conditions A.I.2.d.

## 2. Additional Terms and Conditions

- 2.a** The maximum total annual emissions from this emissions unit shall not exceed the following based upon a rolling, 12-month summation:

2.57 tons per year Particulate emissions (PE);  
7.14 tons per year Particulate Matter less than 10 microns (PM10);  
35.0 tons per year Sulfur Dioxide (SO<sub>2</sub>);  
91.93 tons per year Nitrogen Oxides (NO<sub>x</sub>);  
4.36 tons per year Volatile Organic Compounds (VOC); and  
67.68 tons per year Carbon Monoxide (CO).

- 2.b** Visible particulate emissions from the stack shall not exceed 20 percent (20%) opacity as a six-minute average, except for one six-minute period per hour of not more than 27 percent (27%) opacity. This opacity limitation does not apply during periods of startup, shutdown, or malfunction.
- 2.c** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.d** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-

08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emissions limitation, the use of natural gas and/or very low sulfur No. 2 fuel oil, the use of low-NOx burners, and operating hours restrictions when burning fuel oil.

## II. Operational Restrictions

1. The permittee shall burn only natural gas or No. 2 fuel oil in this emissions unit.
2. The permittee shall install, operate, and maintain low-NOx burners, that comply with the NOx heat input limitation listed in term A.I.1 of this emissions unit, at all times when operating this emissions unit.
3. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of sulfur content and heat content sufficient to meet the sulfur dioxide emission limitation of 0.45 lb/MMBTU of actual heat input on an "as-received basis".
4. The maximum annual hours of operation when burning No. 2 fuel oil in this emissions unit shall not exceed 856 hours, based upon a rolling, 12-month summation of the hours of operation when burning No. 2 fuel oil.

To ensure enforceability during the first 12 calendar months of operation following the startup of this emissions unit, the permittee shall not exceed the hours of operation, when burning No. 2 fuel oil, as specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Hours of Operation When Burning No. 2 Fuel Oil</u>
1	500
1-2	500
1-3	500
1-4	500
1-5	500
1-6	500
1-7	700
1-8	700
1-9	700

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1-10	856
1-11	856
1-12	856

After the first 12 calendar months of operation following startup of this emissions unit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

5. This emissions unit shall comply with the definition of an infrequently operated source when burning No. 2 fuel oil, pursuant to 40 CFR 60.13(i)(2), based upon an annual capacity factor for No. 2 fuel oil of no more than 10 percent as a rolling 365-consecutive day average. Compliance with the record keeping requirements in Section A.III.4 will demonstrate compliance with the annual capacity factor limitation.
6. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.

### **III. Monitoring and/or Recordkeeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBTU)[The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)]. The records shall also include certification from the fuel oil supplier that the oil meets the definition of very low sulfur distillate oil [see 40 CFR 60.49b(r)].

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

3. The permittee shall maintain records of the quantity of natural gas (in cubic feet) and No. 2 fuel oil (in gallons) burned each day in this emissions unit. The permittee shall calculate and maintain records of the annual capacity factor for each fuel burned in this emissions unit. The annual capacity factor shall be determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month [see 40 CFR 60.49b(d)].

4. The permittee shall maintain records of the following information for this emissions unit:
  - a. the total hours of operation when burning No. 2 fuel oil for each day;
  - b. the total hours of operation when burning natural gas for each day;
  - c. the calculation on a daily basis of the annual capacity factor for No. 2 fuel oil as a rolling 365-consecutive day average in order to demonstrate infrequent operation of this emissions unit; and
  - d. beginning after the first 12 calendar months of operation following the startup of this emissions unit, the rolling 12-month summation of operating hours when burning No. 2 fuel oil.

Also during the first 12 calendar months of operation following the startup of this emission unit, the permittee shall record the cumulative operating hours when burning No. 2 fuel oil for each calendar month.

5. The permittee shall maintain records of the following information for each operating day of this emissions unit as specified in 40 CFR 60.49b(g):
  - a. calendar date;
  - b. the average hourly NO<sub>x</sub> emission rates in lb/MMBTU heat input, measured or predicted;
  - c. the 30-day average NO<sub>x</sub> emission rate in lb/MMBTU heat input, calculated at the end of each operating day from the measured or predicted hourly NO<sub>x</sub> emission rates for the preceding 30 operating days of this emissions unit;
  - d. identification of the operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the emission limits specified in Section A.I.1, with the reasons for such excess emissions as well as a description of corrective actions taken;
  - e. identification of the operating days for which pollutant data has not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

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- f. identification of the times when emissions data have been excluded from the calculation of average emission rates and the reasons for excluding data; and
- g. identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

- 6.** The permittee shall conduct, or have conducted, a 6-minute visible particulate emissions test for each daylight shift that this emissions unit burns No. 2 fuel oil. The visible particulate emissions test shall be conducted at the maximum rate of oil consumption during the shift. In addition, the permittee shall conduct, or have conducted, a 6-minute visible particulate emissions test whenever this emissions unit reaches operating load after a cold startup with No. 2 fuel oil.

The visible particulate emissions tests shall be performed in accordance with the following requirements:

- a. The following test method(s) shall be employed to demonstrate compliance with the visible particulate limitation: Method 9 as outlined in 40 CFR Part 60, Appendix A;
- b. The visible particulate emissions test shall be conducted by a certified visible emissions evaluator who has met the specifications of Method 9 outlined in 40 CFR Part 60, Appendix A, and
- c. If the average opacity for a 6-minute set of observations exceeds 10 percent, the observer shall perform two additional 6-minute sets of visible emission observations.

A comprehensive written report on the results of the visible particulate emissions test shall be signed by the person or persons responsible for the test and retained for a period of five years from the date the record was created. This report shall contain the following information:

- a. A copy of the completed visible emissions evaluation form containing the date and time of the test and results of each observation; and
  - b. A copy of the visible emissions evaluator certification.
- 7.** The permittee shall maintain monthly records of the following information for this emissions unit in order to monitor compliance with the rolling, 12-month summation emission limitations:
- a. the total emissions, in tons, for PE, PM10, SO2, NOx, VOC, and CO for each month; and

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- b. the updated rolling, 12-month summation emissions total, in tons, for PE, PM10, SO2, NOx, VOC, and CO (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months). For the first 12 months following startup of this emissions unit, this shall be a cumulative total of all months since startup of this emissions unit.
8. This emissions unit shall be operated and maintained in accordance with the manufacturer's recommendations. The permittee shall maintain records verifying that necessary maintenance activities have been performed on this emissions unit.

**IV. Reporting Requirements**

1. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
  - a. Construction date (no later than 30 days after such date);
  - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
  - c. Actual start-up date (within 15 days after such date); and
  - d. Date of performance testing (if required, at least 30 days prior to testing).

Reports, including the new source information required under 40 CFR 60.49b(a), are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
P. O. Box 163669  
Columbus, Ohio 43216-3669

and

Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, Ohio 45219

2. In lieu of installing a continuous NOx emissions monitoring system (CEMS), the permittee shall submit a NOx compliance plan that identifies the operating conditions

to be monitored under 40 CFR 60.48b(g)(2) and the records to be maintained under 40 CFR 60.49b(g). The plan shall include the requirements of 40 CFR 60.49b(c) and shall be submitted to the Director for approval within 360 days of the initial startup of this emissions unit.

3. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
4. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.2. above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
5. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the rolling, 12-month operating hours limitation when burning No. 2 fuel oil as specified in Section A.II.4.;
  - b. an identification of all exceedances of the rolling 365-consecutive day average annual capacity factor limitation for infrequent operation as specified in Section A.II.5; and
  - c. an identification of all exceedances of the rolling, 12-month emission limitation for PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO as specified in Section A.I.2.a.
6. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
7. The permittee shall submit quarterly reports to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances when the calculated 30-day rolling average NO<sub>x</sub> emission rate exceeds the applicable limits specified in the terms and conditions of this permit during the previous

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calendar quarter.

If there are no excess emissions during the previous calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

8. The permittee shall submit quarterly reports to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances when the 6-minute average opacity exceeds the applicable limits specified in the terms and conditions of this permit during the previous calendar quarter. In addition, the excess emission reports shall include the total time of the visible emission observations during the calendar quarter.

If there are no excess emissions during the previous calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

9. The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency certifying that only very low sulfur oil meeting this definition was burned in this emissions unit. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.
10. The permittee shall submit annual reports which specify the total PE, PM10, SO2, NOx, VOC, and CO emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:  
When burning natural gas, this emissions unit shall not exceed:

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0.002 pounds PE/MMBTU,  
0.007 pounds PM10/MMBTU,  
0.0006 pounds SO2/MMBTU,  
0.005 pounds VOC/MMBTU, and  
0.08 pounds CO/MMBTU.

When burning No.2 fuel oil, this emissions unit shall not exceed:

0.014 pounds PE/MMBTU,  
0.016 pounds PM10/MMBTU,  
0.001 pounds VOC/MMBTU, and  
0.036 pounds CO/MMBTU.

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**Applicable Compliance Method:**

The pound/MMBTU limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) by 1000 gal/140 MMBTU.

If required, the permittee shall demonstrate compliance with the PE, PM10, SO<sub>2</sub> (natural gas), VOC, and CO lb/MMBTU emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 5, 6, 10, 25 and 201.

**b. Emission Limitation(s):**

0.10 pounds NO<sub>x</sub>/MMBTU, when burning natural gas  
0.17 pounds NO<sub>x</sub>/MMBTU, when burning No. 2 fuel oil

**Applicable Compliance Method:**

The permittee shall demonstrate compliance with the lb/MMBTU NO<sub>x</sub> emission limitations based upon the results of the emissions tests required in Section A.V.3, the 30-day NO<sub>x</sub> performance test required in Section A.V.4, and the record keeping requirements in Section A.III.5.

**c. Emission Limitation:**

When burning No.2 fuel oil, this emissions unit shall not exceed:  
0.45 pounds SO<sub>2</sub>/MMBTU of actual heat input

**Applicable Compliance Method:**

For the use of No. 2 fuel oil, the emission limitation specified above was based upon a fuel oil sulfur content of 0.4 percent by weight and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) multiplied by 1000 gal/140 MMBTU. Compliance with the lb/MMBTU emission limitation shall be based upon the record keeping requirements in Section A.III.2.

If required, the permittee shall demonstrate compliance with the lb/MMBTU emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6.

**d. Emission Limitations:**

The total annual emissions from this emissions unit shall not exceed the following as rolling, 12-month summations:

2.57 tons per year PE;  
7.14 tons per year PM10;  
35.0 tons per year SO<sub>2</sub>;  
91.93 tons per year NO<sub>x</sub>;  
4.36 tons per year VOC; and  
67.68 tons per year CO.

**Applicable Compliance Method:**

Compliance with the emission limitation specified above shall be determined by the actual fuel usages, AP-42 emission factors specified above, and the record keeping requirements specified in Section A.III.3 and Section A.III.7.

**e. Emission Limitation:**

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except for one six-minute period per hour of not more than 27 percent opacity.

**Applicable Compliance Method:**

Compliance with the visible particulate emission limitation shall be determined by the monitoring and record keeping requirements specified in Section A.III.6 and emissions testing required in Section A.V.3 of this permit.

- 2.** Compliance with the rolling 12-month operating hours restriction specified in Section A.II.4 determined by the record keeping requirements specified in Section A.III.4.
- 3.** The permittee shall conduct, or have conducted, initial emissions testing for this emissions unit in accordance with the following requirements:
  - a.** The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of this emissions unit.
  - b.** The emission testing shall be conducted to demonstrate compliance with the allowable NO<sub>x</sub> lb/MMBTU limitation while burning natural gas; the allowable NO<sub>x</sub> lb/MMBTU limitation while burning No. 2 fuel oil, and the opacity limitation.
  - c.** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) and visible particulate limitation: for nitrogen oxides, Method 7 of 40 CFR Part 60, Appendix A; and for opacity, Method 9 of

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40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. All operational monitoring systems and equipment shall be installed, operational, and calibrated prior to the emission tests.

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

The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

- 4. In lieu of installing a continuous NO<sub>x</sub> emission monitoring system (CEMS), the permittee shall conduct a 30-day NO<sub>x</sub> compliance test pursuant to 40 CFR 60.46b(e)(1) to demonstrate that the 30-day average NO<sub>x</sub> emissions rate is in compliance with the allowable NO<sub>x</sub> emission limitations. The 30-day NO<sub>x</sub> compliance test shall commence following the date on which the initial emissions test was completed as specified above in Section V.3.

Not later than 30 days prior to the proposed start date of the 30-day test, the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency.

The "Intent to Test" notification shall describe in detail the proposed methods, monitoring equipment, procedures, the emissions units operating parameters, the beginning and ending date(s) of the test , and the person(s) who will be conducting the test .

Failure to submit such notification for review and approval prior to the test may result in the Ohio EPA District Office's or local air agency's refusal to accept the results.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test , examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or performance of the control equipment.

A comprehensive written report on the results of the 30-day compliance test shall be signed by the person or persons responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test . The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

If required, the permittee shall demonstrate compliance with the NO<sub>x</sub> lb/MMBTU emissions limitation through additional 30-day combustion performance tests upon request from the appropriate Ohio EPA District Office or local air agency pursuant to 40 CFR 60.46b(e)(4).

## **VI. Miscellaneous Requirements**

1. The permittee submitted a plan to US EPA Region 5 and received approval of an alternative opacity monitoring program for this emissions unit based on infrequent operation of this emission unit when burning fuel oil pursuant to 40 CFR 60.13(i)(2). Compliance with the opacity limitations under the alternative plan shall be demonstrated by the monitoring and reporting requirements specified above in Section A.III.6, A.III.8, and A.IV.8. Compliance with the infrequent operation designation of this emissions unit shall be demonstrated by the monitoring and record keeping requirements specified above in Section A.III.4. If this emissions unit exceeds the annual capacity factor limitation for No. 2 fuel oil use specified in Section A.II.5 based on the required record keeping in Section A.III.4, the permittee shall comply with continuous opacity monitoring requirements, including the installation and certification

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of a continuous opacity monitoring system, as specified in 40 CFR 60.48b.

2. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM<sub>2.5</sub>. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005, regarding how to address PM<sub>2.5</sub> during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM<sub>10</sub> was considered a surrogate for PM<sub>2.5</sub>. Since the PM<sub>10</sub> emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM<sub>10</sub> and PM<sub>2.5</sub>.

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**B. State Only Enforceable Section**

**I. 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>
180 MMBTU/hour natural gas and No. 2 oil-fired boiler with low NOx burners		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (B005) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s)

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for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

Pollutant: isopropanol

TLV (ug/m3): 491,534

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51  
MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above

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changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
P101 - Paper Machine #1, including 27.2 mmBtu/hr natural gas/LPG-fired drying hoods and off-line wire and felt cleaning - Modification	OAC rule 3745-31-05(A)(3)

Emissions Unit ID: P101

Applicable Emissions

Limitations/Control Measures

OAC rule 3745-21-07(G)

Volatile organic compound (VOC) emissions shall not exceed 3.73 pounds per hour\*, excluding off-line wire & felt cleaning and drying hoods.

OAC rule 3745-23-06(B)

When burning natural gas, the drying hoods shall not exceed the following emission limitations\*:

OAC rule 3745-21-08(B)

0.05 pounds Particulate Emissions (PE) per hour,  
 0.002 pounds PE/MMBTU of actual heat input,  
 0.20 pounds Particulate Matter less than 10 microns (PM10) per hour,  
 0.02 pounds Sulfur Dioxide (SO2) per hour,  
 2.67 pounds Nitrogen Oxides (NOx) per hour,  
 0.15 pounds Volatile organic compounds (VOC) per hour, and  
 2.24 pounds Carbon Monoxide (CO) per hour.

OAC rule 3745-31-05(C)  
 Synthetic Minor to Avoid Non-Attainment New Source Review

When burning LPG (propane), the drying hoods shall not exceed the following emission limitations\*:

OAC rule 3745-17-07(A)(1)

0.18 pounds Particulate Emissions (PE) per hour,  
 0.006 pounds PE/MMBTU of actual heat input,  
 0.18 pounds Particulate Matter less than 10 microns (PM10) per hour,  
 0.01 pounds Sulfur Dioxide (SO2) per hour,  
 5.65 pounds Nitrogen Oxides (NOx) per hour,  
 0.09 pounds Volatile organic compounds (VOC) per hour, and  
 0.95 pounds Carbon Monoxide (CO) per hour.

OAC rule 3745-17-10(B)(1)

When burning any combination of natural gas or LPG, the drying hoods

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shall not exceed the following emission limitations\*:

0.78 tons per year  
Particulate Emissions (PE),

0.89 tons per year  
Particulate Matter less than 10 microns (PM10),  
0.07 tons per year Sulfur Dioxide (SO<sub>2</sub>),

0.64 tons per year  
Volatile organic compounds (VOC), and  
9.81 tons per year  
Carbon Monoxide (CO).

\*The hourly, Lb/MMBTU, and annual emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10 percent (10%) opacity, as a six-minute average.

The requirements of this rule also include compliance with the requirements of OAC rule

3745-21-07(G), OAC rule  
3745-23-06(B), OAC rule  
3745-21-08(B), and OAC rule  
3745-31-05(C).

See terms and conditions  
A.I.2.a., A.I.2.b., A.I.2.f, A.II.4,  
and A.II.5.

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

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

Exempt. See terms and conditions A.II.1.

See terms and conditions A.I.2.c.

See terms and conditions A.I.2.e.

**2. Additional Terms and Conditions**

- 2.a** The maximum total emissions from emissions units P101 and P102, combined, shall not exceed the following emission limitations from off-line wire and felt cleaning operations:

1925 pounds Volatile Organic Compounds (VOC) per week; and

26 tons per year (TPY) of Volatile Organic Compounds (VOC), based upon a rolling, 12-month summation.

- 2.b** The maximum total annual emissions from emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed the following emission limitation based upon a rolling, 12-month summation:

45.70 tons per year (TPY) of Volatile Organic Compounds (VOC).

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emissions limitation, the use of natural gas and/or propane, and the use of non-photochemically reactive materials.

- 2.e** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

**Issue**

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On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.f** The maximum total annual emissions from the drying hoods on emissions units P101 and P102, combined, when burning any combination of natural gas or LPG, shall not exceed the following emission limitation based upon a rolling, 12-month summation:

39.9 tons per year (TPY) of Nitrogen Oxides (NO<sub>x</sub>).

**II. Operational Restrictions**

1. This emissions unit currently does not employ any photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5). It is therefore exempt from all emission limitations and control requirements contained in OAC rule 3745-21-07(G).
2. The permittee shall burn only natural gas or LPG (propane) in this emissions unit.
3. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.
4. The maximum annual VOC input, as applied, of liquid organic materials employed by the off-line wire and felt cleaning operations in emissions units P101 and P102, combined, shall not exceed 26 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the gallons of liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.4). Since these are existing sources, the company has existing records to demonstrate compliance with this limitation.
5. The maximum annual VOC input, as applied, of papermaking and de-inking liquid organic materials employed in emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed 101.55 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the pounds of papermaking and de-inking liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.6). Since this includes existing sources, the company has existing records to demonstrate compliance with this limitation.

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

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1. For each day during which the permittee burns a fuel other than natural gas or LPG , the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
3. The permittee shall collect and record the following information each week for emissions units P101 and P102, combined, from the off-line wire and felt cleaning operations:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in gallons;
  - c. the VOC content of each liquid organic material employed, in pounds per gallon; and
  - d. the total weekly VOC emissions, in pounds per week, calculated by taking the sum of (b) times (c) for each liquid organic material employed.
4. The permittee shall collect and record the following information each month for emissions units P101 and P102, combined, from the off-line wire and felt cleaning operations:
  - a. the total amount of each liquid organic material employed, in gallons;
  - b. the VOC content of each liquid organic material employed, in pounds of VOC per gallon;
  - c. the monthly VOC input (the summation of the results of the value from line a. multiplied by the value from line b. for each liquid organic material employed); and
  - d. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line c. plus the total amount of VOC input for the previous eleven calendar months).
5. The permittee shall maintain monthly records of the following information for emissions

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units P101 and P102, combined, from the off-line wire and felt cleaning operations in order to monitor compliance with the rolling, 12-month summation emission limitation:

- a. the total emissions, in tons, of VOC for each month calculated by taking the monthly VOC input value from term A.III.4.c above and multiplying by the percentage of liquid organic material that is emitted to the air (100 percent), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
6. The permittee shall collect and record the following information each month for emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning operations and drying hoods:
- a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in pounds;
  - c. the VOC content of each liquid organic material employed, in percent by weight; and
  - d. the monthly VOC input (the summation of the results of the value from line b. multiplied by the value from line c. for each liquid organic material employed); and
  - e. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line d. plus the total amount of VOC input for the previous eleven calendar months).
7. The permittee shall maintain monthly records of the following information for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods) in order to monitor compliance with the combined rolling, 12-month summation emission limitation:
- a. the total emissions, in tons, of VOC calculated by taking the monthly VOC input value from term A.III.6.d above and multiplying by the percentage of liquid organic material that is emitted to the air (45 percent, except for liquid/aerosol glue at 100 percent, as provided in the supporting emission testing and material balance data contained in the PTI application 14-05736, submitted 6/14/2005, or the percentage established during the most recent volatile evaporation tests for these emissions units), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of

emissions for the previous eleven calendar months).

8. The permittee shall collect and record the following information each month for emissions units P101 and P102:
  - a. The combined amount of LPG used in the drying hoods associated with emissions units P101 and P102, in gallons per month.
  - b. The combined amount of natural gas used in the drying hoods associated with emissions units P101 and P102, in cubic feet per month.
  - c. The monthly combined NO<sub>x</sub> emissions from the drying hoods associated with emissions units P101 and P102 using the following equation:

$$\begin{aligned} &\text{Monthly NO}_x \text{ emissions (in pounds)} \\ &= [\text{gallons/month LPG used (a)} * 0.019 \text{ lb NO}_x/\text{gallon}] \\ &+ [\text{cubic feet/month natural gas used (b)} * 0.0001 \text{ lb NO}_x/\text{cubic feet}] \end{aligned}$$

The emission factor of 0.019 lb NO<sub>x</sub>/gallon LPG is based on AP-42, Table 1.5-1, revised 10/96. The emission factor of 0.0001 lb NO<sub>x</sub>/cu ft natural gas is based on AP-42, Table 1.4-1, revised 7/98.

- d. The rolling, 12-month summation of NO<sub>x</sub> emissions from the drying hoods associated with emissions units P101 and P102, calculated by adding the current month's total NO<sub>x</sub> emissions to the total NO<sub>x</sub> emissions for the preceding eleven calendar months.

#### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or LPG (propane). The notification shall include a copy of such record and shall be submitted

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to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.

3. The permittee shall submit annual reports that specify the total VOC, NO<sub>x</sub>, and CO emissions from this emissions unit for the calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit the annual Fee Emission Report.
4. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the weekly VOC emissions limitation from the off-line wire and felt cleaning operations for emissions unit P101 and P102, combined, as specified in Section A.I.2.a;
  - b. an identification of all exceedances of the rolling, 12-month VOC input operational restriction from the off-line wire and felt cleaning operations for emissions unit P101 and P102, combined, as specified in Section A.II.4;
  - c. an identification of all exceedances of the rolling, 12-month emission limitation for VOC from the off-line wire and felt cleaning operations for emissions unit P101 and P102, combined, as specified in Section A.I.2.a;
  - d. an identification of all exceedances of the rolling, 12-month VOC input operational restriction for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.II.5;
  - e. an identification of all exceedances of the rolling, 12-month emission limitation for VOC for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.I.2.b.;and
  - f. an identification of all exceedances of the rolling, 12-month emission limitation for NO<sub>x</sub> from the drying hoods on emissions units P101 and P102, combined, when burning any combination of natural gas or LPG, as specified in Section A.I.2.f.
5. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
6. The permittee shall notify Hamilton County Department of Environmental Services in writing prior to employing any liquid organic materials that contain a higher percentage VOC content by weight than those contained in the Permit To Install application

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14-05736, submitted 6/14/2005, for this emissions unit. This notification shall include information sufficient to determine if the materials comply with the existing permit to install limitations. If the use of the material(s) will not comply with the existing permit to install limitations, the permittee shall not use the material until a permit to install modification is issued.

**V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:  
3.73 pounds VOC per hour, excluding off-line wire & felt cleaning and drying hoods

**Applicable Compliance Method:**

The hourly emission limitation specified above is based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05736, submitted June 14, 2005.

If required, the permittee shall demonstrate compliance with the pound per hour VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25.

- b. Emission Limitations:  
When burning natural gas, the drying hoods shall not exceed:  
0.05 pounds PE/hour  
0.20 pounds PM10/hour  
0.02 pounds SO2/hour  
2.67 pounds NOx/hour  
0.15 pounds VOC/hour  
2.24 pounds CO/hour

**When burning LPG (propane), the drying hoods shall not exceed:**

0.18 pounds PE/hour  
0.18 pounds PM10/hour  
0.01 pounds SO2/hour  
5.65 pounds NOx/hour  
0.09 pounds VOC/hour

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0.95 pounds CO/hour

**Applicable Compliance Method:**

The hourly emission limitations specified above are based upon the emission unit's potential to emit and the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998) and Section 1.5, Liquefied Petroleum Gas Combustion (revised 10/1996).

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- c. Emission Limitations:  
When burning natural gas, the drying hoods shall not exceed:  
0.002 pounds PE/MMBTU
- When burning LPG (propane), the drying hoods shall not exceed:  
0.006 pounds PE/MMBTU
- Applicable Compliance Method:  
The pound/MMBTU limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for LPG from AP-42 Section 1.5 (10/96) by 1000 gal/91.5 MMBTU.
- d. Emission Limitations:  
When burning any combination of natural gas or LPG, the drying hoods shall not exceed:
- 0.78 tons per year PE  
0.89 tons per year PM10  
0.07 tons per year SO<sub>2</sub>  
0.64 tons per year VOC  
9.81 tons per year CO
- Applicable Compliance Method:  
The annual emission limitations specified above are based upon the emission unit's potential to emit operating at 8,760 hours per year burning any combination of natural gas or LPG and the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998) and Section 1.5, Liquefied Petroleum Gas Combustion (revised 10/1996).
- e. Emission Limitations:  
1925 pounds of VOC per week, for emissions units P101 and P102 combined, from off-line wire and felt cleaning operations
- 26 tons per year of VOC, based upon a rolling, 12-month summation of emissions units P101 and P102 combined, from off-line wire and felt cleaning operations
- Applicable Compliance Method:

Compliance with the VOC emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.3. and A.III.5.

- f. Emission Limitation:  
45.70 tons per year of VOC, for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire/felt cleaning operations and drying hoods)

Applicable Compliance Method:

Compliance with the VOC emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and the permittee-supplied emission testing and material balance data as provided in the PTI application 14-05736, submitted 6/14/2005, and the papermaking and de-inking volatile evaporation engineering study specified in Section V.2.

- g. Emission Limitation:  
Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

- h. Operational Restriction:  
26 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101 and P102, combined, from off-line wire and felt cleaning operations

Applicable Compliance Method:

Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.4

- i. Operational Restriction:  
101.55 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire and felt cleaning operations and drying hoods)

Applicable Compliance Method:

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Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.6.

- j. Emission Limitation:  
39.9 tons per year of NO<sub>x</sub>, based upon a rolling, 12-month summation of the drying hoods on emissions units P101 and P102, combined, when burning any combination of natural gas or LPG.

Applicable Compliance Method:

Compliance with the NO<sub>x</sub> emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.8.

2. The permittee shall conduct a volatile evaporation engineering study on all paper making and de-inking processes (emission units P101 through P106) to confirm the 45 percent volatile evaporation rate provided by the permittee in the PTI application 14-05736, submitted 6/14/2005, which is used to demonstrate compliance with the combined mass allowable VOC emission limitation contained in this permit to install for emission units P101 - P106.

The volatile evaporation engineering study may consist of mass balance testing based on protocol in published pulp and paper trade association emission studies, use of process water emissions modeling programs such as WATER9, use of EPA-approved stack test methods, or another alternative engineering approach subject to review and approval by the Hamilton County Department of Environmental Services as specified below in the notification submittal.

The engineering study shall be conducted within 3 months after startup of both the new paper making emissions unit P106 and the new de-inking emissions unit P105 identified in this permit to install.

Not later than 60 days prior to the proposed start date of the engineering study, the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the scope and design of the engineering study, proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of test(s) included in the study, and the person(s) who will be conducting the engineering study. Failure to submit such notification for review and approval prior to conducting the engineering study may result in the Hamilton County Department of Environmental Services refusal to accept the results of the engineering study.

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness test(s) and activities included in the engineering study, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions and volatile evaporation from the emissions units.

A comprehensive written report on the results of the engineering study shall be signed by the person or persons responsible for the study and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the engineering study. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit P101 contained in permit to install #14-04560, issued March 18, 2004.
2. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM2.5) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM2.5. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005, regarding how to address PM2.5 during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM10 was considered a surrogate for PM2.5. Since the PM10 emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM10 and PM2.5.

**B. State Only Enforceable Section**

**I. 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>
Paper Machine #1, including 27.2 mmBtu/hr natural gas/LPG-fired drying hoods and off-line wire and felt cleaning - Modification		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (P101) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

Pollutant: isopropanol

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TLV (ug/m3): 491,534

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification"

under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **IV. Reporting Requirements**

None

#### **V. Testing Requirements**

None

#### **VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
P102 - Paper Machine #2, including 27.2 mmBtu/hr natural gas/LPG-fired drying hoods and off-line wire and felt cleaning - Modification	OAC rule 3745-31-05(A)(3)

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	<p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p>	
	<p>0.01 pounds Sulfur Dioxide (SO<sub>2</sub>) per hour, 5.65 pounds Nitrogen Oxides (NO<sub>x</sub>) per hour, 0.09 pounds Volatile Organic Compounds (VOC) per hour, and 0.95 pounds Carbon Monoxide (CO) per hour.</p>	
<p>OAC rule 3745-31-05(C) Synthetic Minor to Avoid Non-Attainment New Source Review</p>	<p>When burning natural gas, the drying hoods shall not exceed the following emission limitations*: 0.05 pounds Particulate Emissions (PE) per hour, 0.002 pounds PE/MMBTU of actual heat input, 0.20 pounds Particulate Matter less than 10 microns (PM<sub>10</sub>) per hour,</p>	<p>When burning any combination of natural gas or LPG, the drying hoods shall not exceed the following emission limitations*: 0.78 tons per year Particulate Emissions (PE), 0.89 tons per year Particulate Matter less than 10 microns (PM<sub>10</sub>), 0.07 tons per year Sulfur Dioxide (SO<sub>2</sub>),</p>
<p>OAC rule 3745-17-07(A)(1)</p>	<p>0.02 pounds Sulfur Dioxide (SO<sub>2</sub>) per hour, 2.67 pounds Nitrogen Oxides (NO<sub>x</sub>) per hour, 0.15 pounds Volatile Organic Compounds (VOC) per hour, and 2.24 pounds Carbon Monoxide (CO) per hour.</p>	<p>0.64 tons per year Volatile Organic Compounds (VOC), and 9.81 tons per year Carbon Monoxide (CO).</p>
<p>OAC rule 3745-17-10(B)(1)</p>	<p>When burning LPG (propane), the drying hoods shall not exceed the following emission limitations*:</p>	<p>*The hourly, Lb/MMBTU, and annual emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.</p>
<p>OAC rule 3745-21-07(G)</p>	<p>0.18 pounds Particulate Emissions (PE) per hour, 0.006 pounds PE/MMBTU of actual heat input,</p>	<p>Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10 percent opacity, as a six-minute average.</p>
<p>OAC rule 3745-23-06(B)</p>	<p>0.18 pounds Particulate Matter less than 10 microns (PM<sub>10</sub>) per hour,</p>	
<p>OAC rule 3745-21-08(B)</p>		<p>The requirements of this rule also include compliance with the</p>

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requirements of OAC rule 3745-21-07(G), OAC rule 3745-23-06(B), and OAC rule 3745-31-05(C).

See terms and conditions A.I.2.a., A.I.2.b., A.I.2.f, A.II.4, and A.II.5.

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

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

Exempt. See terms and conditions A.II.1.

See terms and conditions A.I.2.c.

See terms and conditions A.I.2.e.

**2. Additional Terms and Conditions**

- 2.a** The maximum total emissions from emissions units P101 and P102, combined, shall not exceed the following emission limitations from off-line wire and felt cleaning operations:

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1925 pounds Volatile Organic Compounds (VOC) per week; and

26 tons per year (TPY) of Volatile Organic Compounds (VOC), based upon a rolling, 12-month summation.

- 2.b** The maximum total annual emissions from emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed the following emission limitation based upon a rolling, 12-month summation:

45.70 tons per year (TPY) of Volatile Organic Compounds (VOC).

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emissions limitation, the use of natural gas and/or propane, and the use of non-photochemically reactive materials.
- 2.e** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.f** The maximum total annual emissions from the drying hoods on emissions units P101 and P102, combined, when burning any combination of natural gas or LPG, shall not exceed the following emission limitation based upon a rolling,

12-month summation:

39.9 tons per year (TPY) of Nitrogen Oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

1. This emissions unit currently does not employ any photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5). It is therefore exempt from all emission limitations and control requirements contained in OAC rule 3745-21-07(G).
2. The permittee shall burn only natural gas or LPG (propane) in this emissions unit.
3. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.
4. The maximum annual VOC input, as applied, of liquid organic materials employed by the off-line wire and felt cleaning operations in emissions units P101 and P102, combined, shall not exceed 26 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the gallons of liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.4). Since these are existing sources, the company has existing records to demonstrate compliance with this limitation.
5. The maximum annual VOC input, as applied, of papermaking and de-inking liquid organic materials employed in emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed 101.55 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the pounds of papermaking and de-inking liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.6). Since this includes existing sources, the company has existing records to demonstrate compliance with this limitation.

## **III. Monitoring and/or Recordkeeping Requirements**

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

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2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
3. The permittee shall collect and record the following information each week for emissions units P101 and P102, combined, from the off-line wire and felt cleaning operations:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in gallons;
  - c. the VOC content of each liquid organic material employed, in pounds per gallon; and
  - d. the total weekly VOC emissions, in pounds per week, calculated by taking the sum of (b) times (c) for each liquid organic material employed.
4. The permittee shall collect and record the following information each month for emissions units P101 and P102, combined, from the off-line wire and felt cleaning operations:
  - a. the total amount of each liquid organic material employed, in gallons;
  - b. the VOC content of each liquid organic material employed, in pounds of VOC per gallon;
  - c. the monthly VOC input (the summation of the results of the value from line a. multiplied by the value from line b. for each liquid organic material employed); and
  - d. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line c. plus the total amount of VOC input for the previous eleven calendar months).
5. The permittee shall maintain monthly records of the following information for emissions units P101 and P102, combined, from the off-line wire and felt cleaning operations in order to monitor compliance with the rolling, 12-month summation emission limitation:
  - a. the total emissions, in tons, of VOC for each month calculated by taking the monthly VOC input value from term A.III.4.c above and multiplying by the percentage of liquid organic material that is emitted to the air (100 percent), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

6. The permittee shall collect and record the following information each month for emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning operations and drying hoods:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in pounds;
  - c. the VOC content of each liquid organic material employed, in percent by weight; and
  - d. the monthly VOC input (the summation of the results of the value from line b. multiplied by the value from line c. for each liquid organic material employed); and
  - e. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line d. plus the total amount of VOC input for the previous eleven calendar months).
7. The permittee shall maintain monthly records of the following information for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods) in order to monitor compliance with the combined rolling, 12-month summation emission limitation:
  - a. the total emissions, in tons, of VOC calculated by taking the monthly VOC input value from term A.III.6.d above and multiplying by the percentage of liquid organic material that is emitted to the air (45 percent, except for liquid/aerosol glue at 100 percent, as provided in the supporting emission testing and material balance data contained in the PTI application 14-05736, submitted 6/14/2005, or the percentage established during the most recent volatile evaporation tests for these emissions units), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
8. The permittee shall collect and record the following information each month for emissions units P101 and P102:

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- a. The combined amount of LPG used in the drying hoods associated with emissions units P101 and P102, in gallons per month.
- b. The combined amount of natural gas used in the drying hoods associated with emissions units P101 and P102, in cubic feet per month.
- c. The monthly combined NO<sub>x</sub> emissions from the drying hoods associated with emissions units P101 and P102 using the following equation:

$$\begin{aligned} &\text{Monthly NO}_x \text{ emissions (in pounds)} \\ &= [\text{gallons/month LPG used (a)} * 0.019 \text{ lb NO}_x/\text{gallon}] \\ &+ [\text{cubic feet/month natural gas used (b)} * 0.0001 \text{ lb NO}_x/\text{cubic feet}] \end{aligned}$$

The emission factor of 0.019 lb NO<sub>x</sub>/gallon LPG is based on AP-42, Table 1.5-1, revised 10/96. The emission factor of 0.0001 lb NO<sub>x</sub>/cu ft natural gas is based on AP-42, Table 1.4-1, revised 7/98.

- d. The rolling, 12-month summation of NO<sub>x</sub> emissions from the drying hoods associated with emissions units P101 and P102, calculated by adding the current month's total NO<sub>x</sub> emissions to the total NO<sub>x</sub> emissions for the preceding eleven calendar months.

#### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or LPG (propane). The notification shall include a copy of such record and shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
3. The permittee shall submit annual reports that specify the total VOC, NO<sub>x</sub>, and CO emissions from this emissions unit for the calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit the annual Fee Emission Report.
4. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:

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- a. an identification of all exceedances of the weekly VOC emissions limitation from the off-line wire and felt cleaning operations for emissions unit P101 and P102, combined, as specified in Section A.I.2.a;
  - b. an identification of all exceedances of the rolling, 12-month VOC input operational restriction from the off-line wire and felt cleaning operations for emissions unit P101 and P102, combined, as specified in Section A.II.4;
  - c. an identification of all exceedances of the rolling, 12-month emission limitation for VOC from the off-line wire and felt cleaning operations for emissions unit P101 and P102, combined, as specified in Section A.I.2.a;
  - d. an identification of all exceedances of the rolling, 12-month VOC input operational restriction for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.II.5;
  - e. an identification of all exceedances of the rolling, 12-month emission limitation for VOC for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.I.2.b;and
  - f. an identification of all exceedances of the rolling, 12-month emission limitation for NOx from the drying hoods on emissions units P101 and P102, combined, when burning any combination of natural gas or LPG, as specified in Section A.I.2.f.
5. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
  6. The permittee shall notify Hamilton County Department of Environmental Services in writing prior to employing any liquid organic materials that contain a higher percentage VOC content by weight than those contained in the Permit To Install application 14-05736, submitted 6/14/2005, for this emissions unit. This notification shall include information sufficient to determine if the materials comply with the existing permit to install limitations. If the use of the material(s) will not comply with the existing permit to install limitations, the permittee shall not use the material until a permit to install modification is issued.

## V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:  
3.39 pounds VOC per hour, excluding off-line wire & felt cleaning and drying hoods

Applicable Compliance Method:

The hourly emission limitation specified above is based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05736, submitted June 14, 2005.

If required, the permittee shall demonstrate compliance with the pound per hour VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25.

- b. Emission Limitations:  
When burning natural gas, the drying hoods shall not exceed:  
0.05 pounds PE/hour  
0.20 pounds PM10/hour  
0.02 pounds SO2/hour  
2.67 pounds NOx/hour  
0.15 pounds VOC/hour  
2.24 pounds CO/hour

When burning LPG (propane), the drying hoods shall not exceed:

0.18 pounds PE/hour  
0.18 pounds PM10/hour  
0.01 pounds SO2/hour  
5.65 pounds NOx/hour  
0.09 pounds VOC/hour  
0.95 pounds CO/hour

Applicable Compliance Method:

The hourly emission limitations specified above are based upon the emission unit's potential to emit and the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998) and Section 1.5, Liquefied Petroleum Gas Combustion (revised 10/1996).

- c. Emission Limitations:  
When burning natural gas, the drying hoods shall not exceed:  
0.002 pounds PE/MMBTU

When burning LPG (propane), the drying hoods shall not exceed:  
0.006 pounds PE/MMBTU

Applicable Compliance Method:

The pound/MMBTU limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for LPG from AP-42 Section 1.5 (10/96) by 1000 gal/91.5 MMBTU.

d. Emission Limitations:

When burning any combination of natural gas or LPG, the drying hoods shall not exceed:

0.78 tons per year PE  
0.89 tons per year PM10  
0.07 tons per year SO<sub>2</sub>  
0.64 tons per year VOC  
9.81 tons per year CO

Applicable Compliance Method:

The annual emission limitations specified above are based upon the emission unit's potential to emit operating at 8,760 hours per year burning any combination of natural gas or LPG and the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998) and Section 1.5, Liquefied Petroleum Gas Combustion (revised 10/1996).

e. Emission Limitations:

1925 pounds of VOC per week, for emissions units P101 and P102 combined, from off-line wire and felt cleaning operations

26 tons per year of VOC, based upon a rolling, 12-month summation of emissions units P101 and P102 combined, from off-line wire and felt cleaning operations

Applicable Compliance Method:

Compliance with the VOC emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.3. and A.III.5.

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- f. Emission Limitation:  
45.70 tons per year of VOC, for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire/felt cleaning operations and drying hoods)
- Applicable Compliance Method:  
Compliance with the VOC emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and the permittee-supplied emission testing and material balance data as provided in the PTI application 14-05736, submitted 6/14/2005, and the papermaking and de-inking volatile evaporation engineering study specified in Section V.2.
- g. Emission Limitation:  
Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average
- Applicable Compliance Method:  
If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).
- h. Operational Restriction:  
26 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101 and P102, combined, from off-line wire and felt cleaning operations
- Applicable Compliance Method:  
Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.4
- i. Operational Restriction:  
101.55 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire and felt cleaning operations and drying hoods)
- Applicable Compliance Method:  
Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.6.
- j. Emission Limitation:  
39.9 tons per year of NO<sub>x</sub>, based upon a rolling, 12-month summation of the drying hoods on emissions units P101 and P102, combined, when burning any combination of natural gas or LPG.
- Applicable Compliance Method:

Compliance with the NOx emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.8.

2. The permittee shall conduct a volatile evaporation engineering study on all paper making and de-inking processes (emission units P101 through P106) to confirm the 45 percent volatile evaporation rate provided by the permittee in the PTI application 14-05736, submitted 6/14/2005, which is used to demonstrate compliance with the combined mass allowable VOC emission limitation contained in this permit to install for emission units P101 - P106.

The volatile evaporation engineering study may consist of mass balance testing based on protocol in published pulp and paper trade association emission studies, use of process water emissions modeling programs such as WATER9, use of EPA-approved stack test methods, or another alternative engineering approach subject to review and approval by the Hamilton County Department of Environmental Services as specified below in the notification submittal.

The engineering study shall be conducted within 3 months after startup of both the new paper making emissions unit P106 and the new de-inking emissions unit P105 identified in this permit to install.

Not later than 60 days prior to the proposed start date of the engineering study, the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the scope and design of the engineering study, proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of test(s) included in the study, and the person(s) who will be conducting the engineering study. Failure to submit such notification for review and approval prior to conducting the engineering study may result in the Hamilton County Department of Environmental Services refusal to accept the results of the engineering study.

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness test(s) and activities included in the engineering study, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions and volatile evaporation from the emissions units.

A comprehensive written report on the results of the engineering study shall be signed by the person or persons responsible for the study and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of

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the engineering study. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit P102 contained in permit to install #14-04560, issued March 18, 2004.
2. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM2.5) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM2.5. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005, regarding how to address PM2.5 during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM10 was considered a surrogate for PM2.5. Since the PM10 emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM10 and PM2.5.

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**B. State Only Enforceable Section**

**I. 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>
Paper Machine #2, including 27.2 mmBtu/hr natural gas/LPG-fired drying hoods and off-line wire and felt cleaning - Modification		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (P102) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

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The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

Pollutant: isopropanol

TLV (ug/m3): 491,534

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was

proposed in the application and modeled; and

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **IV. Reporting Requirements**

None

#### **V. Testing Requirements**

None

#### **VI. Miscellaneous Requirements**

None

**Bay V**

**PTI A**

**Issued: 12/13/2005**

Emissions Unit ID: P103

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
P103- Natural De-Inking - Modification	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 0.61 pounds per hour*.  *The hourly emission limitation outlined above is based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with this limit.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G) and OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C) Synthetic Minor to Avoid Non-Attainment New Source Review	See terms and conditions A.I.2.a. and A.II.3.
	OAC rule 3745-21-07(G)	Exempt. See terms and conditions A.II.1.

**Bay West Paper Corp. and Mosinee Holdings Inc.**

**PTI Application: 14-05726**

**Issue:**

**Facility ID: 1409010043**

Emissions Unit ID: P103

**2. Additional Terms and Conditions**

- 2.a** The maximum total annual emissions from emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying

hoods, shall not exceed the following emission limitation based upon a rolling, 12-month summation:

45.70 tons per year (TPY) of Volatile Organic Compounds (VOC).

- 2.b** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of non-photochemically reactive materials.

## **II. Operational Restrictions**

1. This emissions unit currently does not employ any photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5). It is therefore exempt from all emission limitations and control requirements contained in OAC rule 3745-21-07(G).
2. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.
3. The maximum annual VOC input, as applied, of papermaking and de-inking liquid organic materials employed in emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed 101.55 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the pounds of papermaking and de-inking liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.2). Since this includes existing sources, the company has existing records to demonstrate compliance with this limitation.

## **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
2. The permittee shall collect and record the following information each month for emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning operations and drying hoods:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in pounds;

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- c. the VOC content of each liquid organic material employed, in percent by weight; and
  - d. the monthly VOC input (the summation of the results of the value from line b. multiplied by the value from line c. for each liquid organic material employed); and
  - e. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line d. plus the total amount of VOC input for the previous eleven calendar months).
3. The permittee shall maintain monthly records of the following information for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods) in order to monitor compliance with the combined rolling, 12-month summation emission limitation:
- a. the total emissions, in tons, of VOC calculated by taking the monthly VOC input value from term A.III.2.d above and multiplying by the percentage of liquid organic material that is emitted to the air (45 percent, except for liquid/aerosol glue at 100 percent, as provided in the supporting emission testing and material balance data contained in the PTI application 14-05736, submitted 6/14/2005, or the percentage established during the most recent volatile evaporation tests for these emissions units), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

**IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all

Emissions Unit ID: P103

exceedances of the following:

- a. an identification of all exceedances of the rolling, 12-month VOC input operational restriction for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.II.3; and
  - b. an identification of all exceedances of the rolling, 12-month emission limitation for VOC for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.I.2.a.
3. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
  4. The permittee shall notify Hamilton County Department of Environmental Services in writing prior to employing any liquid organic materials that contain a higher percentage VOC content by weight than those contained in the Permit To Install application 14-05736, submitted 6/14/2005, for this emissions unit. This notification shall include information sufficient to determine if the materials comply with the existing permit to install limitations. If the use of the material(s) will not comply with the existing permit to install limitations, the permittee shall not use the material until a permit to install modification is issued.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
0.61 pounds VOC per hour  
  
Applicable Compliance Method:  
The hourly emission limitation specified above is based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05736, submitted June 14, 2005.  
  
If required, the permittee shall demonstrate compliance with the pound per hour VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25.
  - b. Emission Limitation:  
45.70 tons per year of VOC, for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire/felt cleaning and drying hoods)

**Applicable Compliance Method:**

Compliance with the VOC emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.3 and the permittee-supplied emission testing and material balance data as provided in the PTI application 14-05736, submitted 6/14/2005, and the papermaking and de-inking volatile evaporation engineering study specified in Section V.2.

**c. Operational Restriction:**

101.55 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire and felt cleaning operations and drying hoods)

**Applicable Compliance Method:**

Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.2.

2. The permittee shall conduct a volatile evaporation engineering study on all paper making and de-inking processes (emission units P101 through P106) to confirm the 45 percent volatile evaporation rate provided by the permittee in the PTI application 14-05736, submitted 6/14/2005, which is used to demonstrate compliance with the combined mass allowable VOC emission limitation contained in this permit to install for emission units P101 - P106.

The volatile evaporation engineering study may consist of mass balance testing based on protocol in published pulp and paper trade association emission studies, use of process water emissions modeling programs such as WATER9, use of EPA-approved stack test methods, or another alternative engineering approach subject to review and approval by the Hamilton County Department of Environmental Services as specified below in the notification submittal.

The engineering study shall be conducted within 3 months after startup of both the new paper making emissions unit P106 and the new de-inking emissions unit P105 identified in this permit to install.

Not later than 60 days prior to the proposed start date of the engineering study, the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the scope and design of the engineering study, proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of test(s)

Emissions Unit ID: P103

included in the study, and the person(s) who will be conducting the engineering study. Failure to submit such notification for review and approval prior to conducting the engineering study may result in the Hamilton County Department of Environmental Services refusal to accept the results of the engineering study.

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness test(s) and activities included in the engineering study, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions and volatile evaporation from the emissions units.

A comprehensive written report on the results of the engineering study shall be signed by the person or persons responsible for the study and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the engineering study. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit P103 contained in permit to install #14-04560, issued March 18, 2004.

**Bay V**

**PTI A**

**Issued: 12/13/2005**

Emissions Unit ID: P103

**B. State Only Enforceable Section**

**I. 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>
Natural De-Inking - Modification		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (P103) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

**Bay West Paper Corp. and Mosinee Holdings Inc.****Facility ID: 1409010043****PTI Application: 14-05726****Issue:**

Emissions Unit ID: P103

Pollutant: isopropanol

TLV (ug/m3): 491,534

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be

**Bay V****PTI A****Issued: 12/13/2005**

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required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Bay V**

**PTI A**

**Issued: 12/13/2005**

Emissions Unit ID: P104

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
P104 - Bleach De-Inking - Modification	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 0.68 pounds per hour*.  *The hourly emission limitation outlined above is based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with this limit.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G) and OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C) Synthetic Minor to Avoid Non-Attainment New Source Review	See terms and conditions A.I.2.a. and A.II.3.
	OAC rule 3745-21-07(G)	Exempt. See terms and conditions A.II.1.

**Bay West Paper Corp. and Mosinee Holdings Inc.**  
**PTI Application: 11-05726**  
**Issue:**

**Facility ID: 1409010043**

Emissions Unit ID: P104

**2. Additional Terms and Conditions**

- 2.a** The maximum total annual emissions from emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying

hoods, shall not exceed the following emission limitation based upon a rolling, 12-month summation:

45.70 tons per year (TPY) of Volatile Organic Compounds (VOC).

- 2.b** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of non-photochemically reactive materials.

## **II. Operational Restrictions**

1. This emissions unit currently does not employ any photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5). It is therefore exempt from all emission limitations and control requirements contained in OAC rule 3745-21-07(G).
2. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.
3. The maximum annual VOC input, as applied, of papermaking and de-inking liquid organic materials employed in emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed 101.55 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the pounds of papermaking and de-inking liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.2). Since this includes existing sources, the company has existing records to demonstrate compliance with this limitation.

## **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
2. The permittee shall collect and record the following information each month for emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning operations and drying hoods:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in pounds;

- c. the VOC content of each liquid organic material employed, in percent by weight; and
  - d. the monthly VOC input (the summation of the results of the value from line b. multiplied by the value from line c. for each liquid organic material employed); and
  - e. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line d. plus the total amount of VOC input for the previous eleven calendar months).
3. The permittee shall maintain monthly records of the following information for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods) in order to monitor compliance with the combined rolling, 12-month summation emission limitation:
- a. the total emissions, in tons, of VOC calculated by taking the monthly VOC input value from term A.III.2.d above and multiplying by the percentage of liquid organic material that is emitted to the air (45 percent, except for liquid/aerosol glue at 100 percent, as provided in the supporting emission testing and material balance data contained in the PTI application 14-05736, submitted 6/14/2005, or the percentage established during the most recent volatile evaporation tests for these emissions units), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all

Emissions Unit ID: P104

exceedances of the following:

- a. an identification of all exceedances of the rolling, 12-month VOC input operational restriction for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.II.3; and
  - b. an identification of all exceedances of the rolling, 12-month emission limitation for VOC for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.I.2.a.
3. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
  4. The permittee shall notify Hamilton County Department of Environmental Services in writing prior to employing any liquid organic materials that contain a higher percentage VOC content by weight than those contained in the Permit To Install application 14-05736, submitted 6/14/2005, for this emissions unit. This notification shall include information sufficient to determine if the materials comply with the existing permit to install limitations. If the use of the material(s) will not comply with the existing permit to install limitations, the permittee shall not use the material until a permit to install modification is issued.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
0.68 pounds VOC per hour  
  
Applicable Compliance Method:  
The hourly emission limitation specified above is based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05736, submitted June 14, 2005.  
  
If required, the permittee shall demonstrate compliance with the pound per hour VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25.
  - b. Emission Limitation:  
45.70 tons per year of VOC, for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire/felt cleaning operations and drying

hoods)

Applicable Compliance Method:

Compliance with the VOC emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.3 and the permittee-supplied emission testing and material balance data as provided in the PTI application 14-05736, submitted 6/14/2005, and the papermaking and de-inking volatile evaporation engineering study specified in Section V.2.

- c. Operational Restriction:  
101.55 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire and felt cleaning operations and drying hoods)

Applicable Compliance Method:

Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.2.

2. The permittee shall conduct a volatile evaporation engineering study on all paper making and de-inking processes (emission units P101 through P106) to confirm the 45 percent volatile evaporation rate provided by the permittee in the PTI application 14-05736, submitted 6/14/2005, which is used to demonstrate compliance with the combined mass allowable VOC emission limitation contained in this permit to install for emission units P101 - P106.

The volatile evaporation engineering study may consist of mass balance testing based on protocol in published pulp and paper trade association emission studies, use of process water emissions modeling programs such as WATER9, use of EPA-approved stack test methods, or another alternative engineering approach subject to review and approval by the Hamilton County Department of Environmental Services as specified below in the notification submittal.

The engineering study shall be conducted within 3 months after startup of both the new paper making emissions unit P106 and the new de-inking emissions unit P105 identified in this permit to install.

Not later than 60 days prior to the proposed start date of the engineering study, the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the scope and design of the engineering study, proposed test methods and

**Bay West Paper Corp. and Mosinee Holdings Inc.****Facility ID: 1409010043****PTI Application: 14-05726****Issue**

Emissions Unit ID: P104

procedures, the emissions unit operating parameters, the time(s) and date(s) of test(s) included in the study, and the person(s) who will be conducting the engineering study. Failure to submit such notification for review and approval prior to conducting the engineering study may result in the Hamilton County Department of Environmental Services refusal to accept the results of the engineering study.

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness test(s) and activities included in the engineering study, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions and volatile evaporation from the emissions units.

A comprehensive written report on the results of the engineering study shall be signed by the person or persons responsible for the study and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the engineering study. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit P104 contained in permit to install #14-04560, issued March 18, 2004.

**Bay V**

**PTI A**

**Issued: 12/13/2005**

Emissions Unit ID: P104

**B. State Only Enforceable Section**

**I. 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>
Bleach De-Inking - Modification		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (P104) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

**Bay West Paper Corp. and Mosinee Holdings Inc.****Facility ID: 1409010043****PTI Application: 14-05726****Issue:**

Emissions Unit ID: P104

Pollutant: isopropanol

TLV (ug/m3): 491,534

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be

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required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**PTI A**

**Issued: 12/13/2005**

Emissions Unit ID: P105

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
P105 - De-Inking No. 3, natural and bleaching combined	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 0.73 pounds per hour*.  *The hourly emission limitation outlined above is based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with this limit.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G) and OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C) Synthetic Minor to Avoid Non-Attainment New Source Review	See terms and conditions A.I.2.a. and A.II.3.
	OAC rule 3745-21-07(G)	Exempt. See terms and conditions A.II.1.

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**2. Additional Terms and Conditions**

- 2.a** The maximum total annual emissions from emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying

hoods, shall not exceed the following emission limitation based upon a rolling, 12-month summation:

45.70 tons per year (TPY) of Volatile Organic Compounds (VOC).

- 2.b** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of non-photochemically reactive materials.

## **II. Operational Restrictions**

1. This emissions unit currently does not employ any photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5). It is therefore exempt from all emission limitations and control requirements contained in OAC rule 3745-21-07(G).
2. Upon startup of any of the following new emission units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.
3. The maximum annual VOC input, as applied, of papermaking and de-inking liquid organic materials employed in emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed 101.55 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the pounds of papermaking and de-inking liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.2). Since this includes existing sources, the company has existing records to demonstrate compliance with this limitation.

## **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
2. The permittee shall collect and record the following information each month for emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning operations and drying hoods:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in pounds;

- c. the VOC content of each liquid organic material employed, in percent by weight; and
  - d. the monthly VOC input (the summation of the results of the value from line b. multiplied by the value from line c. for each liquid organic material employed); and
  - e. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line d. plus the total amount of VOC input for the previous eleven calendar months).
3. The permittee shall maintain monthly records of the following information for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods) in order to monitor compliance with the combined rolling, 12-month summation emission limitation:
- a. the total emissions, in tons, of VOC calculated by taking the monthly VOC input value from term A.III.2.d above and multiplying by the percentage of liquid organic material that is emitted to the air (45 percent, except for liquid/aerosol glue at 100 percent, as provided in the supporting emission testing and material balance data contained in the PTI application 14-05736, submitted 6/14/2005, or the percentage established during the most recent volatile evaporation tests for these emissions units), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all

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exceedances of the following:

- a. an identification of all exceedances of the rolling, 12-month VOC input operational restriction for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.II.3; and
  - b. an identification of all exceedances of the rolling, 12-month emission limitation for VOC for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.I.2.a.
3. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
  4. The permittee shall notify Hamilton County Department of Environmental Services in writing prior to employing any liquid organic materials that contain a higher percentage VOC content by weight than those contained in the Permit To Install application 14-05736, submitted 6/14/2005, for this emissions unit. This notification shall include information sufficient to determine if the materials comply with the existing permit to install limitations. If the use of the material(s) will not comply with the existing permit to install limitations, the permittee shall not use the material until a permit to install modification is issued.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
0.73 pounds VOC per hour  
  
Applicable Compliance Method:  
The hourly emission limitation specified above is based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05736, submitted June 14, 2005.  
  
If required, the permittee shall demonstrate compliance with the pound per hour VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25.
  - b. Emission Limitation:  
45.70 tons per year of VOC, for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire/felt cleaning operations and drying

hoods)

Applicable Compliance Method:

Compliance with the VOC emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.3 and the permittee-supplied emission testing and material balance data as provided in the PTI application 14-05736, submitted 6/14/2005, and the papermaking and de-inking volatile evaporation engineering study specified in Section V.2.

- c. Operational Restriction:  
101.55 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire and felt cleaning operations and drying hoods)

Applicable Compliance Method:

Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.2.

2. The permittee shall conduct a volatile evaporation engineering study on all paper making and de-inking processes (emission units P101 through P106) to confirm the 45 percent volatile evaporation rate provided by the permittee in the PTI application 14-05736, submitted 6/14/2005, which is used to demonstrate compliance with the combined mass allowable VOC emission limitation contained in this permit to install for emission units P101 - P106.

The volatile evaporation engineering study may consist of mass balance testing based on protocol in published pulp and paper trade association emission studies, use of process water emissions modeling programs such as WATER9, use of EPA-approved stack test methods, or another alternative engineering approach subject to review and approval by the Hamilton County Department of Environmental Services as specified below in the notification submittal.

The engineering study shall be conducted within 3 months after startup of both the new paper making emissions unit P106 and the new de-inking emissions unit P105 identified in this permit to install.

Not later than 60 days prior to the proposed start date of the engineering study, the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the scope and design of the engineering study, proposed test methods and

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procedures, the emissions unit operating parameters, the time(s) and date(s) of test(s) included in the study, and the person(s) who will be conducting the engineering study. Failure to submit such notification for review and approval prior to conducting the engineering study may result in the Hamilton County Department of Environmental Services refusal to accept the results of the engineering study.

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness test(s) and activities included in the engineering study, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions and volatile evaporation from the emissions units.

A comprehensive written report on the results of the engineering study shall be signed by the person or persons responsible for the study and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the engineering study. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

**VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section**

**I. 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>
De-Inking No. 3		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (P105) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

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Pollutant: isopropanol

TLV (ug/m3): 491,534

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be

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required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
P106 - Paper Machine No. 3, including 55 mmBtu/hr natural gas/LPG-fired drying hoods and off-line wire and felt cleaning	OAC rule 3745-31-05(A)(3)

Emissions Unit ID: P106

Applicable Emissions

Limitations/Control Measures

OAC rule 3745-21-07(G)

Volatile organic compound (VOC) emissions shall not exceed 7.12 pounds per hour\*, excluding off-line wire & felt cleaning and drying hoods.

OAC rule 3745-23-06(B)

When burning natural gas, the drying hoods shall not exceed the following emission limitations\*:

OAC rule 3745-21-08(B)

0.10 pounds Particulate Emissions (PE) per hour,  
 0.002 pounds PE/MMBTU of actual heat input,  
 0.41 pounds Particulate Matter less than 10 microns (PM10) per hour,  
 0.03 pounds Sulfur Dioxide (SO2) per hour,  
 5.39 pounds Nitrogen Oxides (NOx) per hour,  
 0.30 pounds Volatile Organic Compounds (VOC) per hour, and  
 4.53 pounds Carbon Monoxide (CO) per hour.

OAC rule 3745-31-05(C)  
 Synthetic Minor to Avoid Non-Attainment New Source Review

When burning LPG (propane), the drying hoods shall not exceed the following emission limitations\*:

OAC rule 3745-17-07(A)(1)

0.36 pounds Particulate Emissions (PE) per hour,  
 0.006 pounds PE/MMBTU of actual heat input,  
 0.36 pounds Particulate Matter less than 10 microns (PM10) per hour,  
 0.01 pounds Sulfur Dioxide (SO2) per hour,  
 11.42 pounds Nitrogen Oxides (NOx) per hour,  
 0.18 pounds Volatile Organic Compounds (VOC) per hour, and  
 1.92 pounds Carbon Monoxide (CO) per hour.

OAC rule 3745-17-10(B)(1)

When burning any combination of natural gas or LPG, the drying hoods

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shall not exceed the following emission limitations\*:

1.58 tons per year  
Particulate Emissions (PE),

1.79 tons per year  
Particulate Matter less than 10 microns (PM10),  
0.14 tons per year Sulfur Dioxide (SO<sub>2</sub>),

50.02 tons per year  
Nitrogen Oxides (NO<sub>x</sub>),  
1.3 tons per year Volatile Organic Compounds (VOC), and  
19.84 tons per year  
Carbon Monoxide (CO).

\*The hourly, lb/MMBTU, and annual emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10 percent opacity, as a six-minute average.

The requirements of this rule also include compliance with the

requirements of OAC rule 3745-21-07(G), OAC rule 3745-23-06(B), OAC rule 3745-21-08(B), and OAC rule 3745-31-05(C).

See terms and conditions A.I.2.a., A.I.2.b., A.II.5, and A.II.6.

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

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

Exempt. See terms and conditions A.II.1.

See terms and conditions A.I.2.c.

See terms and conditions A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The maximum total emissions from this emissions unit shall not exceed the following emission limitations from off-line wire and felt cleaning operations:

1925 pounds Volatile Organic Compounds (VOC) per week; and

26 tons per year (TPY) of Volatile Organic Compounds (VOC), based upon a rolling, 12-month summation.

- 2.b** The maximum total annual emissions from emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed the following emission limitation based upon a rolling, 12-month summation:

45.70 tons per year (TPY) of Volatile Organic Compounds (VOC).

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the

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requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emissions limitation, the use of natural gas and/or propane, the use of low-NOx burners in the drying hoods, and the use of non-photochemically reactive materials.

**II. Operational Restrictions**

1. This emissions unit currently does not employ any photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5). It is therefore exempt from all emission limitations and control requirements contained in OAC rule 3745-21-07(G).
2. The permittee shall burn only natural gas or LPG (propane) in this emissions unit.
3. The permittee shall install, operate, and maintain low-NOx burners at all times on this emissions unit.
4. Upon startup of any of the following new emissions units, B005, P105, and P106, the permittee shall immediately comply with the stated terms and conditions contained in this permit to install for existing emissions units B001, B002, B003, B004, P101, P102, P103, and P104.
5. The maximum annual VOC input, as applied, of liquid organic materials employed by this emissions unit for off-line wire and felt cleaning operations shall not exceed 26 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the gallons of liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.4).

To ensure enforceability during the first 12 calendar months of operation following the startup of this emissions unit, the permittee shall not exceed the tons of VOC input for off-line wire and felt cleaning operations as specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative VOC Input (in tons)</u>
1	15
1-2	15
1-3	15
1-4	15
1-5	15
1-6	15
1-7	20
1-8	20
1-9	20

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1-10	26
1-11	26
1-12	26

After the first 12 calendar months of operation following startup of this emissions unit, compliance with the annual VOC input limitation shall be based upon a rolling, 12-month summation of the VOC input for off-line wire and felt cleaning operations.

6. The maximum annual VOC input, as applied, of papermaking and de-inking liquid organic materials employed in emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning and drying hoods, shall not exceed 101.55 tons per year as a rolling 12-month summation. The VOC input shall be determined by multiplying the pounds of papermaking and de-inking liquid organic materials employed per month by the VOC content of each liquid organic material (see record keeping requirements in term A.III.6). Since this includes existing sources, the company has existing records to demonstrate compliance with this limitation.

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

1. For each day during which the permittee burns a fuel other than natural gas or LPG , the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
3. The permittee shall collect and record the following information each week from the off-line wire and felt cleaning operations for this emissions unit:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in gallons;
  - c. the VOC content of each liquid organic material employed, in pounds per gallon; and
  - d. the total weekly VOC emissions, in pounds per week, calculated by taking the sum of (b) times (c) for each liquid organic material employed.
4. The permittee shall collect and record the following information each month for this

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emissions unit from the off-line wire and felt cleaning operations:

- a. the total amount of each liquid organic material employed, in gallons;
- b. the VOC content of each liquid organic material employed, in pounds of VOC per gallon;
- c. the monthly VOC input (the summation of the results of the value from line a. multiplied by the value from line b. for each liquid organic material employed); and
- d. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line c. plus the total amount of VOC input for the previous eleven calendar months).

Also during the first 12 calendar months of operation following the startup of this emission unit, the permittee shall record the cumulative VOC input for each calendar month.

5. The permittee shall maintain monthly records of the following information for this emissions unit from the off-line wire and felt cleaning operations in order to monitor compliance with the rolling, 12-month summation emission limitation:
  - a. the total emissions, in tons, of VOC for each month calculated by taking the monthly VOC input value from term A.III.4.c above and multiplying by the percentage of liquid organic material that is emitted to the air (100 percent), then dividing by 2000; and
  - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
6. The permittee shall collect and record the following information each month for emissions units P101, P102, P103, P104, P105, and P106, combined, excluding off-line wire/felt cleaning operations and drying hoods:
  - a. the name and identification of each liquid organic material employed;
  - b. the amount of each liquid organic material employed, in pounds;
  - c. the VOC content of each liquid organic material employed, in percent by weight; and
  - d. the monthly VOC input (the summation of the results of the value from line b. multiplied by the value from line c. for each liquid organic material employed); and

- e. the updated rolling, 12-month summation total, in tons, of VOC input (the total amount of VOC input for the current month recorded in line d. plus the total amount of VOC input for the previous eleven calendar months).
7. The permittee shall maintain monthly records of the following information for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods) in order to monitor compliance with the combined rolling, 12-month summation emission limitation:
    - a. the total emissions, in tons, of VOC calculated by taking the monthly VOC input value from term A.III.6.d above and multiplying by the percentage of liquid organic material that is emitted to the air (45 percent, except for liquid/aerosol glue at 100 percent, as provided in the supporting emission testing and material balance data contained in the PTI application 14-05736, submitted 6/14/2005, or the percentage established during the most recent volatile evaporation tests for these emissions units), then dividing by 2000; and
    - b. the updated rolling, 12-month summation emissions total, in tons, of VOC (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or LPG (propane). The notification shall include a copy of such record and shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
3. The permittee shall submit annual reports that specify the total VOC, NO<sub>x</sub>, and CO emissions from this emissions unit for the calendar year. These reports shall be

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submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit the annual Fee Emission Report.

4. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the weekly VOC emissions limitation from the off-line wire and felt cleaning operations for this emissions unit as specified in Section A.I.2.a;
  - b. an identification of all exceedances of the rolling, 12-month VOC input operational restriction from the off-line wire and felt cleaning operations for this emissions unit as specified in Section A.II.5;
  - c. an identification of all exceedances of the rolling, 12-month emission limitation for VOC from the off-line wire and felt cleaning operations for this emissions unit as specified in Section A.I.2.a;
  - d. an identification of all exceedances of the rolling, 12-month VOC input operational restriction for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.II.6; and
  - e. an identification of all exceedances of the rolling, 12-month emission limitation for VOC for emissions units P101, P102, P103, P104, P105, and P106, combined, (excluding off-line wire/felt cleaning operations and drying hoods), as specified in Section A.I.2.b.
5. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions of this permit unless otherwise specified.
6. The permittee shall notify Hamilton County Department of Environmental Services in writing prior to employing any liquid organic materials that contain a higher percentage VOC content by weight than those contained in the Permit To Install application 14-05736, submitted 6/14/2005, for this emissions unit. This notification shall include information sufficient to determine if the materials comply with the existing permit to install limitations. If the use of the material(s) will not comply with the existing permit to install limitations, the permittee shall not use the material until a permit to install modification is issued.

## V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

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- a. Emission Limitation:  
7.12 pounds VOC per hour, excluding off-line wire & felt cleaning and drying hoods

**Applicable Compliance Method:**

The hourly emission limitation specified above is based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05736, submitted June 14, 2005.

If required, the permittee shall demonstrate compliance with the pound per hour VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25.

- b. Emission Limitations:  
When burning natural gas, the drying hoods shall not exceed:  
0.10 pounds PE/hour  
0.41 pounds PM10/hour  
0.03 pounds SO2/hour  
5.39 pounds NOx/hour  
0.30 pounds VOC/hour  
4.53 pounds CO/hour

When burning LPG (propane), the drying hoods shall not exceed:

0.36 pounds PE/hour  
0.36 pounds PM10/hour  
0.01 pounds SO2/hour,  
11.42 pounds NOx/hour  
0.18 pounds VOC/hour  
1.92 pounds CO/hour

**Applicable Compliance Method:**

The hourly emission limitations specified above for PE, PM10, SO2, NOx, VOC, and CO are based upon the emission unit's potential to emit and the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998) and Section 1.5, Liquefied Petroleum Gas Combustion (revised 10/1996).

The hourly emission limitations specified above for NOx are based upon the emission unit's potential to emit and the manufacturer guaranteed emissions

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data for the low-NOx burners as specified in the PTI application 14-05736, submitted June 14, 2005.

- c. Emission Limitations:  
When burning natural gas, the drying hoods shall not exceed:  
0.002 pounds PE/MMBTU

When burning LPG (propane), the drying hoods shall not exceed:  
0.006 pounds PE/MMBTU

Applicable Compliance Method:

The pound/MMBTU limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for LPG (propane) from AP-42 Section 1.5 (10/96) by 1000 gal/91.5 MMBTU.

- d. Emission Limitations:  
When burning any combination of natural gas or LPG, the drying hoods shall not exceed:

1.58 tons per year PE  
1.79 tons per year PM10  
0.14 tons per year SO<sub>2</sub>  
50.02 tons per year NO<sub>x</sub>  
1.3 tons per year VOC  
19.84 tons per year CO

Applicable Compliance Method:

The annual emission limitations specified above are based upon the emission unit's potential to emit operating at 8,760 hours per year burning any combination of natural gas or LPG and the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998) and Section 1.5, Liquefied Petroleum Gas Combustion (revised 10/1996).

- e. Emission Limitations:  
1925 pounds of VOC per week from off-line wire and felt cleaning operations

26 tons per year of VOC, based upon a rolling, 12-month summation from off-line wire and felt cleaning operations

Applicable Compliance Method:

Compliance with the VOC emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.3 and A.III.5.

- f. Emission Limitation:

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45.70 tons per year of VOC, for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire and felt cleaning operations and drying hoods)

**Applicable Compliance Method:**

Compliance with the VOC emission limitation specified above shall be determined by the record keeping requirements specified in Section A.III.7 and the permittee-supplied emission testing and material balance data as provided in the PTI application 14-05736, submitted 6/14/2005, and the papermaking and de-inking volatile evaporation engineering study specified in Section V.2.

**g. Emission Limitation:**

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average

**Applicable Compliance Method:**

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**h. Operational Restriction:**

26 TPY as a rolling, 12-month summation of monthly VOC input from off-line wire and felt cleaning operations

**Applicable Compliance Method:**

Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.4

**i. Operational Restriction:**

101.55 TPY as a rolling, 12-month summation of monthly VOC input for emissions units P101, P102, P103, P104, P105, and P106, combined (excluding off-line wire and felt cleaning operations and drying hoods)

**Applicable Compliance Method:**

Compliance with the operational restriction specified above shall be determined by the record keeping requirements specified in Sections A.III.6.

2. The permittee shall conduct a volatile evaporation engineering study on all paper making and de-inking processes (emission units P101 through P106) to confirm the 45

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percent volatile evaporation rate provided by the permittee in the PTI application 14-05736, submitted 6/14/2005, which is used to demonstrate compliance with the combined mass allowable VOC emission limitation contained in this permit to install for emission units P101 - P106.

The volatile evaporation engineering study may consist of mass balance testing based on protocol in published pulp and paper trade association emission studies, use of process water emissions modeling programs such as WATER9, use of EPA-approved stack test methods, or another alternative engineering approach subject to review and approval by the Hamilton County Department of Environmental Services as specified below in the notification submittal.

The engineering study shall be conducted within 3 months after startup of both the new paper making emissions unit P106 and the new de-inking emissions unit P105 identified in this permit to install.

Not later than 60 days prior to the proposed start date of the engineering study, the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the scope and design of the engineering study, proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of test(s) included in the study, and the person(s) who will be conducting the engineering study. Failure to submit such notification for review and approval prior to conducting the engineering study may result in the Hamilton County Department of Environmental Services refusal to accept the results of the engineering study.

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness test(s) and activities included in the engineering study, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions and volatile evaporation from the emissions units.

A comprehensive written report on the results of the engineering study shall be signed by the person or persons responsible for the study and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the engineering study. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

1. This source is located in an area that was designated as non-attainment for Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>) under the National Ambient Air Quality Standards (NAAQS) effective April 5, 2005. Regulations have not yet been promulgated to implement non-attainment new source review for PM<sub>2.5</sub>. In the absence of implementation regulations, the USEPA issued interim guidance on April 5, 2005,

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regarding how to address PM2.5 during new source review. For the purpose of this permit to install, pursuant to this USEPA guidance, PM10 was considered a surrogate for PM2.5. Since the PM10 emissions are less than the major modification threshold, the non-attainment new source review requirements do not apply for PM10 and PM2.5.

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**B. State Only Enforceable Section**

**I. 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>
Paper Machine No. 3		See terms and conditions B.III.1.

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (P106) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70.

The following summarizes the results of the modeling for the "worst case" pollutant(s) for the emissions from Emissions Units P101, P102, P103, P104, P105, P106, B001, B002, B003, B004, and B005 combined:

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Pollutant: isopropanol

TLV (ug/m3): 491,534

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 342.51

MAGLC (ug/m3): 11,703

Pollutant: ammonia

TLV (ug/m3): 17,413

Maximum Hourly Emission Rate (lbs/hr): 1.93

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.37

MAGLC (ug/m3): 415

Other toxic pollutants evaluated in this permit to install included butane, ethane, hexane, methane, nitrous oxide, pentane, and propane. Isopropanol and ammonia were determined to represent worst case.

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, 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");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be

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required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None