



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
HURON COUNTY**

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:

Lazarus Gov.  
Center

**Application No: 03-13427**

**DATE: 10/29/2002**

R R Donnelley and Sons Co  
Christopher Hassmann  
1145 Conwell Ave  
Willard, OH 44888-0001

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

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

CC: USEPA

NWDO



**Permit To Install  
Terms and Conditions**

**Issue Date: 10/29/2002  
Effective Date: 10/29/2002**

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 03-13427**

Application Number: 03-13427  
APS Premise Number: 0339030135  
Permit Fee: **\$200**  
Name of Facility: R R Donnelley and Sons Co  
Person to Contact: Christopher Hassmann  
Address: 1145 Conwell Ave  
Willard, OH 44888-0001

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**1145 Conwell Ave  
Willard, Ohio**

Description of proposed emissions unit(s):  
**book printing.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

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 the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.10 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 to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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. 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.

## 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 reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, 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, reopening 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.

## 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 this Permit To Install.

## 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 of 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, the State, and citizens 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.
  - 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 To Install 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 thirty (30) 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.

**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.

**B. State Only Enforceable Permit To Install General Terms and Conditions****1. Compliance Requirements**

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

**2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping 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 quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**3. Permit Transfers**

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

**4. Termination of Permit To Install**

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete

within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

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

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

#### **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**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**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., 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>
OC	23.1

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PTI A<sub>1</sub>

**Modification Issued: 10/29/2002**

Emissions Unit ID: K022

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

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

None

**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>
K022 - K022 - heatset web offset lithographic printing press (#352)	OAC rule 3745-31-05(A)	See A.I.2.c
		4.62 pounds organic compounds (OC) emissions/hour, as a monthly average, 20.2 tons OC/year from emissions unit K023
	OAC rule 3745-31-05(D)	23.1 tons OC/rolling 12-month period (see A.I.2.b) from emissions units K022 and K023, combined
	OAC rule 3745-21-07(G)	see section A.II.7
	OAC rule 3745-17-11(B)	None (see section A.I.2.d)
	OAC rule 3745-17-07(A)	None (see section A.I.2.e)

**2. Additional Terms and Conditions**

- 2.a The OC emission limitation of 4.62 pounds/hour (as a monthly average) and 20.2 tons/year for emissions unit K023 is based on the following information:
  - i. the percentage of the ink solvent retained on the web after the dryer is 20 percent\*;
  - ii. the percentage of the fountain solution solvent available for capture in the dryer is 70 percent\*;
  - iii. the percentage of the auto blanket wash (clean up) solvent available for capture in the dryer is 40 percent\*; and,

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- iv. the percentage of the hand blanket wash (clean up) solvent retained on the cloths is 75 percent\*\*.
  - \* This is based on the draft Control Techniques Guideline (Control of Volatile Organic Compound Emissions from Offset Lithographic Printing, dated September 1993) and the Alternative Control Techniques document, dated November 8, 1993.
  - \*\* This is based on information supplied by the permittee.
- 2.b** The permittee has requested a federally enforceable limitation of 23.1 tons OC/rolling 12-month period for emissions units K022 and K023 combined based on OC content, usage restrictions and OC control requirements for both units for the purpose of avoiding PSD applicability.
- 2.c** The permittee shall employ best available technology (BAT) on this emissions unit. BAT has been determined to be the use of a control system meeting the following requirements for control of OC emissions:
- i. The control system shall consist of a collection system for the dryer. The collection system shall achieve a capture efficiency of 100 percent of the press dryer exhaust; and,
  - ii. The control system shall be equipped with a thermal oxidizer with a destruction efficiency of at least 90 percent when operating at an average temperature of 1300 degrees Fahrenheit or greater.
- 2.d** The uncontrolled mass rate of particulate emissions (PE) from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply since the facility is located in Huron County, which is identified as a P-3 county.
- 2.e** This emissions unit is not subject to the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.

**II. Operational Restrictions**

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1. The permittee shall comply with the following average OC content restrictions for the materials employed in this emissions unit:
  - a. ink: 0.45 pound OC/pound of ink, as applied;
  - b. fountain solution: 0.25 pound OC /gallon of fountain solution material, as applied; and,
  - c. cleanup materials (auto and hand blanket wash): 7.5 pounds OC/gallon of cleanup material, as applied.
2. The maximum rolling 12-month usage rate of OC containing materials for emissions units K022 and K023 combined is limited by the following equation:

Where,

M = the increment of the rolling 12-month period; and,  
n = the increment of the OC containing material used during the period  
And where all other variables are the same as described in paragraph A.III.1.e below.

3. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1300 degrees Fahrenheit.
4. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, fountain solution, cleanup material, and blanket wash) employed in emissions unit K023:
  - a. the name and identification number of each graphic arts material employed;
  - b. documentation on whether or not each material employed is a photochemically reactive material;
  - c. the quantity of each graphic arts material employed, in gallons (in pounds for inks);

- d. the OC content of each graphic arts material, in pounds/gallon (in pounds/pound for inks), as applied;
- e. the OC emissions for each graphic arts material employed, in tons/month, calculated as follows:

$$E_n = [U_n \times V_n \times (1 - R_n/100) \times \{1 - (C_n/100) \times (K/100)\}]$$

Where:

$E_n$  = OC emissions from an individual material (tons OC emitted/month);  
 $U_n$  = Total usage of the individual material - typically ink, fountain solution, and cleaning solvents (tons of material/month);  
 $V_n$  = Average OC content of material as determined by Method 24 (lb OC/lb material);  
 $R_n$  = Amount of OC retained on the web or on cloths (tons OC retained/100 tons OC used):

$R_n = 20$  for inks

$R_n = 0$  for fountain solutions

$R_n = 0$  for auto blanket wash (cleanup)  
solvent

$R_n = 75$  for hand blanket wash (cleanup)  
solvent

$C_n$  = Capture efficiency for individual material emitted (tons OC captured/100 tons OC into dryer):

$C_n = 100$  for inks

$C_n = 70$  for fountain solutions

$C_n = 40$  for auto blanket wash (cleanup)  
solvent

$C_n = 0$  for hand blanket wash (cleanup)  
solvent; and

$K$  = Control efficiency as determined during the most recent performance test and maintained via parametric monitoring (tons OC controlled/100 tons OC into thermal oxidizer).

- f. the total OC emission rate of all graphic arts materials employed, in tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

Where:

$E_M$  = Monthly OC emissions, in tons/month; and,  
 $E_n$  = OC emissions from each individual graphic arts material (A.III.1.e).

- g. the number of hours this emissions unit was in operation (e.g., when graphic arts materials were being applied or employed);
- h. the average hourly OC emission rate [(A.III.1.f divided by A.III.1.g) divided by 2000];
- i. the rolling, 12-month OC emission rate from emissions units K022 and K023, combined, calculated as follows:

$$E_T = E_{M1} + E_{M2} + E_{M3} + \dots + E_{M12}$$

Where:

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$E_T$  = Annual OC emissions (tons) as summed from the previous 12 months of monthly OC emissions;

$E_M$  = Monthly OC emissions (tons/month).

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information each day for this emissions unit:

- a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1300 degrees Fahrenheit; and,
- b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.

**IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify exceedances of any of the following:
  - a. the emission limitation of 4.62 pounds OC/hour (as a monthly average);
  - b. the OC content restrictions; and,
  - c. the emission limitation of 23.1 tons OC/rolling, 12-month period from units K022 and K023, combined.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in section A.II.2 of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports which identify each day during which a photochemically reactive material was employed.
4. All reports shall be submitted in accordance with Part I.A.1.c of this permit.

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**Modif**

Facility ID: **0339030135**

Emissions Unit ID: K022

**V. Testing Requirements**

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

- a. Emission Limitation:  
4.62 pounds OC/hour (as a monthly average) and 20.2 tons OC/year, from unit K023

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly, as a monthly average, OC emission limitation from unit K023 through the record keeping required in Section A.III.1 of this permit.

The tons/year emission limitation was developed by multiplying the pound/hour limitation by the maximum operating schedule of 8,760 hours/year and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation:  
23.1 tons OC/rolling 12-month period, combined with K022

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation through the record keeping required in section A.III.1 of this permit.

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 emissions testing shall be conducted in accordance with the schedule outlined in the facility's final Title V permit which was issued on December 31, 2001.
- b. the emission testing shall be conducted to demonstrate compliance with the capture efficiency (see A.V.2.c.i) and destruction efficiency (see A.V.2.c.ii) for OC; and,
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
- i. in accordance with Engineering Guide #56 (Question 19), the capture efficiency may be assumed to be 100 percent for organic compounds not retained in the

substrate or emitted uncontrolled provided that the press dryer maintains a negative pressure within the press dryer and the dryer exhausts to a control device (such as the thermal oxidizer). Therefore, during testing of the thermal oxidizer, the permittee shall verify that a negative pressure was maintained within the press dryer; and,

- ii. the destruction efficiency shall be conducted in accordance with the test methods and procedures specified in OAC rule 3745-21-10 and shall measure the percent reduction in mass emissions of organic compounds between the inlet and outlet of the vapor control system. The test method selected shall be based on a consideration of the diversity of organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
3. 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.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the

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Emissions Unit ID: K022

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.

**VI. Miscellaneous Requirements**

None

Modification Issued: 10/29/2002

**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>
K022 - K022 - heatset web offset lithographic printing press (#352)		see sections B.II and B.III

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

- 1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethylene glycol

TLV (mg/m3): 127

Maximum Hourly Emission Rate (lbs/hr): 4.62\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 23.55

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MAGLC (ug/m<sup>3</sup>): 3,024

\* assume that all of the emissions are ethylene glycol

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

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
2. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
  - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and,
  - c. where computer modeling is performed, a copy of the resulting computer model runs that

show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None

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**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>	<u>Applicable Emissions Limitations/Control Measures</u>
K023 - K023 - heatset web offset lithographic printing press (#353)	OAC rule 3745-31-05(A)	see A.I.2.c  4.62 pounds organic compounds (OC) emissions/hour, as a monthly average, 20.2 tons OC/year from emissions unit K023
	OAC rule 3745-31-05(D)	23.1 tons OC/rolling 12-month period (see A.I.2.b) from emissions units K022 and K023, combined
	OAC rule 3745-21-07(G)	see section A.II.7
	OAC rule 3745-17-11(B)	None (see section A.I.2.d)
	OAC rule 3745-17-07(A)	None (see section A.I.2.e)

**2. Additional Terms and Conditions**

- 2.a The OC emission limitation of 4.62 pounds/hour (as a monthly average) and 20.2 tons/year for emissions unit K023 is based on the following information:

- i. the percentage of the ink solvent retained on the web after the dryer is 20 percent\*;

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- ii. the percentage of the fountain solution solvent available for capture in the dryer is 70 percent\*;
- iii. the percentage of the auto blanket wash (clean up) solvent available for capture in the dryer is 40 percent\*; and,
- iv. the percentage of the hand blanket wash (clean up) solvent retained on the cloths is 75 percent\*\*.

\* This is based on the draft Control Techniques Guideline (Control of Volatile Organic Compound Emissions from Offset Lithographic Printing, dated September 1993) and the Alternative Control Techniques document, dated November 8, 1993.

\*\* This is based on information supplied by the permittee.

- 2.b** The permittee has requested a federally enforceable limitation of 23.1 tons OC/rolling 12-month period for emissions units K022 and K023 combined based on OC content, usage restrictions and OC control requirements for both units for the purpose of avoiding PSD applicability.
- 2.c** The permittee shall employ best available technology (BAT) on this emissions unit. BAT has been determined to be the use of a control system meeting the following requirements for control of OC emissions:
  - i. The control system shall consist of a collection system for the dryer. The collection system shall achieve a capture efficiency of 100 percent of the press dryer exhaust; and,
  - ii. The control system shall be equipped with a thermal oxidizer with a destruction efficiency of at least 90 percent when operating at an average temperature of 1300 degrees Fahrenheit or greater.
- 2.d** The uncontrolled mass rate of particulate emissions (PE) from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11

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does not apply since the facility is located in Huron County, which is identified as a P-3 county.

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

## II. Operational Restrictions

1. The permittee shall comply with the following average OC content restrictions for the materials employed in this emissions unit:
  - a. ink: 0.45 pound OC/pound of ink, as applied;
  - b. fountain solution: 0.25 pound OC /gallon of fountain solution material, as applied; and,
  - c. cleanup materials (auto and hand blanket wash): 7.5 pounds OC/gallon of cleanup material, as applied.
2. The maximum rolling 12-month usage rate of OC containing materials for emissions units K022 and K023 combined is limited by the following equation:

Where,

M = the increment of the rolling 12-month period; and,  
 n = the increment of the OC containing material used during the period  
 And where all other variables are the same as described in paragraph A.III.1.e below.

3. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1300 degrees Fahrenheit.
4. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

## III. Monitoring and/or Record keeping Requirements

1. The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, fountain solution, cleanup material, and blanket wash) employed in emissions unit K023:
  - a. the name and identification number of each graphic arts material employed;
  - b. documentation on whether or not each material employed is a photochemically reactive material;

- c. the quantity of each graphic arts material employed, in gallons (in pounds for inks);
- d. the OC content of each graphic arts material, in pounds/gallon (in pounds/pound for inks), as applied;
- e. the OC emissions for each graphic arts material employed, in tons/month, calculated as follows:

$$E_n = [U_n \times V_n \times (1 - R_n/100) \times \{1 - (C_n/100) \times (K/100)\}]$$

Where:

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$E_n$  = OC emissions from an individual material (tons OC emitted/month);  
 $U_n$  = Total usage of the individual material - typically ink, fountain solution, and cleaning solvents (tons of material/month);  
 $V_n$  = Average OC content of material as determined by Method 24 (lb OC/lb material);  
 $R_n$  = Amount of OC retained on the web or on cloths (tons OC retained/100 tons OC used):

$R_n = 20$  for inks

$R_n = 0$  for fountain solutions

$R_n = 0$  for auto blanket wash (cleanup solvent)

$R_n = 75$  for hand blanket wash (cleanup solvent)

$C_n$  = Capture efficiency for individual material emitted (tons OC captured/100 tons OC into dryer):

$C_n = 100$  for inks

$C_n = 70$  for fountain solutions

$C_n = 40$  for auto blanket wash (cleanup solvent)

$C_n = 0$  for hand blanket wash (cleanup solvent; and

$K$  = Control efficiency as determined during the most recent performance test and maintained via parametric monitoring (tons OC controlled/100 tons OC into thermal oxidizer).

- f. the total OC emission rate of all graphic arts materials employed, in tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

Where:

$E_M$  = Monthly OC emissions, in tons/month; and,

$E_n$  = OC emissions from each individual graphic arts material (A.III.1.e).

- g. the number of hours this emissions unit was in operation (e.g., when graphic arts materials

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were being applied or employed);

- h. the average hourly OC emission rate [(A.III.1.f divided by A.III.1.g) divided by 2000];
- i. the rolling, 12-month OC emission rate from emissions units K022 and K023, combined, calculated as follows:

$$E_T = E_{M1} + E_{M2} + E_{M3} + \dots + E_{M12}$$

Where:

$E_T$  = Annual OC emissions (tons) as summed from the previous 12 months of monthly OC emissions;

$E_M$  = Monthly OC emissions (tons/month).

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information each day for this emissions unit:

- a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1300 degrees Fahrenheit; and,
- b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.

**IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify exceedances of any of the following:
  - a. the emission limitation of 4.62 pounds OC/hour (as a monthly average);
  - b. the OC content restrictions; and,

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- c. the emission limitation of 23.1 tons OC/rolling, 12-month period from units K022 and K023, combined.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in section A.II.2 of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports which identify each day during which a photochemically reactive material was employed.
4. All reports shall be submitted in accordance with Part I.A.1.c of this permit.

**V. Testing Requirements**

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

- a. Emission Limitation:  
4.62 pounds OC/hour (as a monthly average) and 20.2 tons OC/year, from unit K023

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly, as a monthly average, OC emission limitation from unit K023 through the record keeping required in Section A.III.1 of this permit.

The tons/year emission limitation was developed by multiplying the pound/hour limitation by the maximum operating schedule of 8,760 hours/year and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation:  
23.1 tons OC/rolling 12-month period, combined with K022

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation through the record keeping required in section A.III.1 of this permit.

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 emissions testing shall be conducted in accordance with the schedule outlined in the facility's final Title V permit which was issued on December 31, 2001.
- b. the emission testing shall be conducted to demonstrate compliance with the capture efficiency (see A.V.2.c.i) and destruction efficiency (see A.V.2.c.ii) for OC; and,
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
- i. in accordance with Engineering Guide #56 (Question 19), the capture efficiency may be assumed to be 100 percent for organic compounds not retained in the

substrate or emitted uncontrolled provided that the press dryer maintains a negative pressure within the press dryer and the dryer exhausts to a control device (such as the thermal oxidizer). Therefore, during testing of the thermal oxidizer, the permittee shall verify that a negative pressure was maintained within the press dryer; and,

- ii. the destruction efficiency shall be conducted in accordance with the test methods and procedures specified in OAC rule 3745-21-10 and shall measure the percent reduction in mass emissions of organic compounds between the inlet and outlet of the vapor control system. The test method selected shall be based on a consideration of the diversity of organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
3. 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.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the

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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.

**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>
K023 - K023 - heatset web offset lithographic printing press (#353)		see sections B.II and B.III

### **2. Additional Terms and Conditions**

**2.a** None

## **II. Operational Restrictions**

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethylene glycol

TLV (mg/m<sup>3</sup>): 127

Maximum Hourly Emission Rate (lbs/hr): 4.62\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 23.55

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MAGLC (ug/m<sup>3</sup>): 3,024

\* assume that all of the emissions are ethylene glycol

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

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
2. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
  - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and,
  - c. where computer modeling is performed, a copy of the resulting computer model runs that

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show the results of the application of the "Air Toxic Policy" for the change.

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

None

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**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None