



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 01-08064

DATE: 07/27/00

E I DuPont De Nemours & Co
Michael Taylor
800 DuPont Rd
Circleville, OH 43113

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

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

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

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

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

CDO



**Permit To Install
Terms and Conditions**

**Issue Date: July 27, 2000
Effective Date: July 27, 2000**

FINAL PERMIT TO INSTALL 01-08064

Application Number: 01-08064
APS Premise Number: 0165010004
Permit Fee: **\$1600.00**
Name of Facility: E I DuPont De Nemours & Co
Person to Contact: Michael Taylor
Address: 800 DuPont Rd
Circleville, OH 43113

Location of proposed air contaminant source(s) [emissions unit(s)]:
**800 DuPont Rd
Circleville, Ohio**

Description of proposed emissions unit(s):
Film line 3; recycle unit 2; recycle unit 2 header.

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 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.11 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

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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

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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.

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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. 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.

5. Termination of Permit To Install

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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

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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.

6. 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 are inadequate 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 prove to be inadequate or cannot meet applicable standards.

7. 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.

8. 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).

9. 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.

10. 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.

11. 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>
PE	7.12
OC	29.7
NOX	59.8
SO2	0.3
CO	36.0

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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. Emissions units No. 4 vaporizer (B008), No. 5 Boiler-Clayton (B012) and Casting Line Heater (P070) shall be permanently shut down and Permits to Operate shall be withdrawn before start up of the emissions units in this permit per netting agreement.

The total NOX allowable emissions for this permit to install, 01-8064, is 59.8 TPY. Of the total 59.8 TPY, only 55.0 TPY are considered new emissions from the new installations of P080 and B014. Per the netting agreement as stated above, Dupont has agreed to reduce the current facility emissions by 15.25 TPY so that the total net increased NOX emissions will be 39.75 TPY, therefore avoiding PSD review.

Units B005, B006 and B007 were included in this permit to install so that their PTIs would be modified to include the NOX emissions reductions of the netting agreement. The 4.8 TPY NOX emissions from these unit should not be considered new emissions but rather a modification of currently existing emissions.

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

None

E I D_U

PTI A

Emissions Unit ID: B005

Issued: July 27, 2000

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>
B005 - Power Vaporizer 1	OAC rule 3745-31-05(A)(3)	<p>NOX emissions shall not exceed 0.86 #/hr. PE emissions shall not exceed 0.04 #/hr. SO₂ emissions shall not exceed 0.005 #/hr. CO emissions shall not exceed 0.18 #/hr. The combined emissions from emissions units B005, B006 and B007 shall not exceed 4.8 TPY NOX, 0.22 TPY PE, 0.03 TPY SO₂ and 1.0 TPY CO. See A.I.2.a and A.I.2.b below.</p>
	OAC rule 3745-17-07(A)(1)	<p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).</p>
	OAC rule 3745-31-05(D)	<p>Visible emissions from the stack shall not exceed 20% opacity, as a 6 minute average.</p> <p>See Additional Term and Condition A.I.2.a. below.</p>

2. Additional Terms and Conditions

- 2.a For the purposes of netting NOX emissions, the combined emissions from emissions

units B005, B006 and B007 shall not exceed 4.8 TPY NOX.

- 2.b** The combined emissions from emissions units B005, B006 and B007 shall not exceed 0.22 TPY PE, 0.03 TPY SO₂ and 1.0 TPY CO.

II. Operational Restrictions

1. This emissions unit shall burn natural gas only.
2. For the purposes of netting NOX emissions, emissions units B005, B006 and B007 shall not exceed the maximum combined firing rate of 10.9 Million BTU/hr.
3. The maximum hourly fuel usage for this emissions unit shall not exceed 8600 cubic feet of natural gas per hour.
4. The combined hourly fuel usage for emissions units B005, B006 and B007 shall not exceed 10,920 cubic feet of natural gas per hour and 95,659,200 cubic feet of natural gas per year, based on 8760 hours per year.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain daily records of the individual firing rate, in Million Btu/hr, for this emissions unit.
3. The permittee shall maintain daily records of the operating hours for this emissions unit.
4. The permittee shall maintain daily records of the total quantity of fuel used for this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit annual deviation (excursion) reports which document all exceedances of the combined operating rate limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted as described in Part 1 - General Terms and Conditions of

this permit under section A.1.

3. The permittee shall submit annual reports which identify any exceedances of the combined hourly fuel usage limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted as described in Part 1 - General Terms and Conditions of this permit under section A.1.

V. Testing Requirements

1. Emissions limitation:
0.86 # NOX/hr individual, 4.8 TPY NOX combined

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Applicable Compliance Method:

Based on AP-42, table 1.4-2, dated 1/95, emission factor 100 # NOX/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
(8600 cuft/hr)(100 # NOX/1,000,000 cu.ft) = 0.86 # NOX/hr/vaporizer

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
(10,920 cuft/hr)(100 # NOX/1,000,000 cu.ft)(8760 hr/yr) / 2000 #/ton = 4.8 TPY NOX

2. Emissions limitation:
0.04 # PE/hr individual, 0.22 TPY PE combined

Applicable Compliance Method:

Based on AP-42, table 1.4-1, dated 1/95, emission factor 4.5 # PE/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
(8600 cuft/hr)(4.5 # PE/1,000,000 cu.ft) = 0.04 # PE/hr/vaporizer

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
(10,920 cuft/hr)(4.5 # PE/1,000,000 cu.ft)(8760 hr/yr) / 2000 #/ton = 0.22 TPY PE

3. Emissions limitation:
0.005 # SO₂/hr individual, 0.03 TPY SO₂ combined

Applicable Compliance Method:

Based on AP-42, table 1.4-2, dated 1/95, emission factor 0.6 # SO₂/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(0.6 \# \text{ SO}_2/1,000,000 \text{ cu.ft}) = 0.005 \# \text{ SO}_2/\text{hr/vaporizer}$

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
 $(10,920 \text{ cuft/hr})(0.6 \# \text{ SO}_2/1,000,000 \text{ cu.ft})(8760 \text{ hr/yr}) / 2000 \#/\text{ton} = 0.03 \text{ TPY SO}_2$

4. Emissions limitation:
0.18 #CO/hr individual, 1.0 TPY CO combined

Applicable Compliance Method:

Based on AP-42, table 1.4-1, dated 1/95, emission factor 21 # CO/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas usage of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(21 \# \text{ CO}/1,000,000 \text{ cu.ft}) = 0.18 \# \text{ CO/hr/vaporizer}$

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
 $(10,920 \text{ cuft/hr})(21 \# \text{ CO}/1,000,000 \text{ cu.ft})(8760 \text{ hr/yr}) / 2000 \#/\text{ton} = 1.0 \text{ TPY CO}$

VI. Miscellaneous Requirements

None

E I D_U

PTI A

Emissions Unit ID: B005

Issued: July 27, 2000

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>
B005 - Power Vaporizer 1	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

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>
B006 - Power Vaporizer 2	OAC rule 3745-31-05(A)(3)	NOX emissions shall not exceed 0.86 #/hr. PE emissions shall not exceed 0.04 #/hr. SO ₂ emissions shall not exceed 0.005 #/hr. CO emissions shall not exceed 0.18 #/hr. The combined emissions from emissions units B005, B006 and B007 shall not exceed 4.8 TPY NOX, 0.22 TPY PE, 0.03 TPY SO ₂ and 1.0 TPY CO. See A.I.2.a and A.I.2.b below.
	OAC rule 3745-17-07(A)(1)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-31-05(D)	Visible emissions from shack shall not exceed 20% opacity, as a 6 minute average. See Additional Term and Condition A.I.2.a. below.

2. Additional Terms and Conditions

- 2.a For the purposes of netting NOX emissions, the combined emissions from emissions units B005, B006 and B007 shall not exceed 4.8 TPY NOX.
- 2.b The combined emissions from emissions units B005, B006 and B007 shall not exceed 0.22 TPY PE, 0.03 TPY SO₂ and 1.0 TPY CO.

II. Operational Restrictions

1. This emissions unit shall burn natural gas only.
2. For the purposes of netting NOX emissions, emissions units B005, B006 and B007 shall not exceed the maximum combined firing rate of 10.9 Million BTU/hr.
3. The maximum hourly fuel usage for this emissions unit shall not exceed 8600 cubic feet of natural gas per hour.
4. The combined hourly fuel usage for emissions units B005, B006 and B007 shall not exceed 10,920 cubic feet of natural gas per hour and 95,659,200 cubic feet of natural gas per year, based on 8760 hours per year.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain daily records of the individual firing rate, in Million Btu/hr, for this emissions unit.
3. The permittee shall maintain daily records of the operating hours for this emissions unit.
4. The permittee shall maintain daily records of the total quantity of fuel used for this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit annual deviation (excursion) reports which document all exceedances of the combined operating rate limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted as described in Part 1 - General Terms and Conditions of this permit under section A.1.
3. The permittee shall submit annual reports which identify any exceedances of the combined hourly fuel usage limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted as described in Part 1 - General Terms and Conditions of this permit under

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Emissions Unit ID: B006

V. Testing Requirements

1. Emissions limitation:
0.86 # NOX/hr individual, 4.8 TPY NOX combined

Emissions Unit ID: B006

Applicable Compliance Method:

Based on AP-42, table 1.4-2, dated 1/95, emission factor 100 # NOX/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(100 \text{ # NOX}/1,000,000 \text{ cu.ft}) = 0.86 \text{ # NOX/hr/vaporizer}$

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
 $(10,920 \text{ cuft/hr})(100 \text{ # NOX}/1,000,000 \text{ cu.ft})(8760 \text{ hr/yr}) / 2000 \text{ #/ton} = 4.8 \text{ TPY NOX}$

2. Emissions limitation:
 0.04 # PE/hr individual, 0.22 TPY PE combined

Applicable Compliance Method:

Based on AP-42, table 1.4-1, dated 1/95, emission factor 4.5 # PE/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(4.5 \text{ # PE}/1,000,000 \text{ cu.ft}) = 0.04 \text{ # PE/hr/vaporizer}$

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
 $(10,920 \text{ cuft/hr})(4.5 \text{ # PE}/1,000,000 \text{ cu.ft})(8760 \text{ hr/yr}) / 2000 \text{ #/ton} = 0.22 \text{ TPY PE}$

3. Emissions limitation:
 0.005 # SO₂/hr individual, 0.03 TPY SO₂ combined

Applicable Compliance Method:

Based on AP-42, table 1.4-2, dated 1/95, emission factor 0.6 # SO₂/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(0.6 \text{ # SO}_2/1,000,000 \text{ cu.ft}) = 0.005 \text{ # SO}_2/\text{hr/vaporizer}$

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Annual emissions based on the combined maximum annual fuel use summation from A.III.3.

$(10,920 \text{ cuft/hr})(0.6 \text{ \# SO}_2/1,000,000 \text{ cu.ft.})(8760 \text{ hr/yr}) / 2000 \text{ \#/ton} = 0.03 \text{ TPY SO}_2$

4. Emissions limitation:
0.18 #CO/hr individual, 1.0 TPY CO combined

Applicable Compliance Method:

Based on AP-42, table 1.4-1, dated 1/95, emission factor 21 # CO/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas usage of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(21 \text{ \# CO}/1,000,000 \text{ cu.ft.}) = 0.18 \text{ \# CO/hr/vaporizer}$

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.

$(10,920 \text{ cuft/hr})(21 \text{ \# CO}/1,000,000 \text{ cu.ft.})(8760 \text{ hr/yr}) / 2000 \text{ \#/ton} = 1.0 \text{ TPY CO}$

VI. Miscellaneous Requirements

None

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Emissions Unit ID: B006

Issued: July 27, 2000

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>
B006 - Power Vaporizer 2	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: B007

Issued: July 27, 2000

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>
B007 - Power Vaporizer 3	OAC rule 3745-31-05(A)(3)	NOX emissions shall not exceed 0.86 #/hr. PE emissions shall not exceed 0.04 #/hr. SO ₂ emissions shall not exceed 0.005 #/hr. CO emissions shall not exceed 0.18 #/hr. The combined emissions from emissions units B005, B006 and B007 shall not exceed 4.8 TPY NOX, 0.22 TPY PE, 0.03 TPY SO ₂ and 1.0 TPY CO. See A.I.2.a and A.I.2.b below.
	OAC rule 3745-17-07(A)(1)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-31-05(D)	Visible emissions from shack shall not exceed 20% opacity, as a 6 minute average
		See Additional Term and Condition A.I.2.a. below.

2. Additional Terms and Conditions

- 2.a For the purposes of netting NOX emissions, the combined emissions from emissions units B005, B006 and B007 shall not exceed

Emissions Unit ID: B007

4.8 TPY NOX.

- 2.b** The combined emissions from emissions units B005, B006 and B007 shall not exceed 0.22 TPY PE, 0.03 TPY SO₂ and 1.0 TPY CO.

II. Operational Restrictions

1. This emissions unit shall burn natural gas only.
2. For the purposes of netting NOX emissions, emissions units B005, B006 and B007 shall not exceed the maximum combined firing rate of 10.9 Million BTU/hr.
3. The maximum hourly fuel usage for this emissions unit shall not exceed 8600 cubic feet of natural gas per hour.
4. The combined hourly fuel usage for emissions units B005, B006 and B007 shall not exceed 10,920 cubic feet of natural gas per hour and 95,659,200 cubic feet of natural gas per year, based on 8760 hours per year.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain daily records of the individual firing rate, in Million Btu/hr, for this emissions unit.
3. The permittee shall maintain daily records of the operating hours for this emissions unit.
4. The permittee shall maintain daily records of the total quantity of fuel used for this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit annual deviation (excursion) reports which document all exceedances of the combined operating rate limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted as described in Part 1 - General Terms and Conditions of this permit under section A.1.
3. The permittee shall submit annual reports which identify any exceedances of the combined hourly fuel usage limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted as described in Part 1 - General Terms and Conditions of this permit under

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V. Testing Requirements

1. Emissions limitation:
0.86 # NOX/hr individual, 4.8 TPY NOX combined

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Applicable Compliance Method:

Based on AP-42, table 1.4-2, dated 1/95, emission factor 100 # NOX/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
(8600 cuft/hr)(100 # NOX/1,000,000 cu.ft) = 0.86 # NOX/hr/vaporizer

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
(10,920 cuft/hr)(100 # NOX/1,000,000 cu.ft)(8760 hr/yr) / 2000 #/ton = 4.8 TPY NOX

2. Emissions limitation:
0.04 # PE/hr individual, 0.22 TPY PE combined

Applicable Compliance Method:

Based on AP-42, table 1.4-1, dated 1/95, emission factor 4.5 # PE/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
(8600 cuft/hr)(4.5 # PE/1,000,000 cu.ft) = 0.04 # PE/hr/vaporizer

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
(10,920 cuft/hr)(4.5 # PE/1,000,000 cu.ft)(8760 hr/yr) / 2000 #/ton = 0.22 TPY PE

3. Emissions limitation:
0.005 # SO₂/hr individual, 0.03 TPY SO₂ combined

Applicable Compliance Method:

Based on AP-42, table 1.4-2, dated 1/95, emission factor 0.6 # SO₂/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas use of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(0.6 \# \text{ SO}_2/1,000,000 \text{ cu.ft}) = 0.005 \# \text{ SO}_2/\text{hr/vaporizer}$

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
 $(10,920 \text{ cuft/hr})(0.6 \# \text{ SO}_2/1,000,000 \text{ cu.ft})(8760 \text{ hr/yr}) / 2000 \#/\text{ton} = 0.03 \text{ TPY SO}_2$

4. Emissions limitation:
 0.18 #CO/hr individual, 1.0 TPY CO combined

Applicable Compliance Method:

Based on AP-42, table 1.4-1, dated 1/95, emission factor 21 # CO/10⁶ cu.ft. natural gas with 1000 BTU/scf average natural gas heat value.

Maximum hourly firing rate of 8.6 Million BTU, maximum annual combined hourly firing rate of 10.92 Million BTU.

Maximum natural gas usage of 8600 cu.ft./hr/vaporizer
 $(8600 \text{ cuft/hr})(21 \# \text{ CO}/1,000,000 \text{ cu.ft}) = 0.18 \# \text{ CO}/\text{hr/vaporizer}$

Annual emissions based on the combined maximum annual fuel use summation from A.III.3.
 $(10,920 \text{ cuft/hr})(21 \# \text{ CO}/1,000,000 \text{ cu.ft})(8760 \text{ hr/yr}) / 2000 \#/\text{ton} = 1.0 \text{ TPY CO}$

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>
B007 - Power Vaporizer 3	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: B014

Issued: July 27, 2000

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>
B014 - Kapton Solvent Recycle Heater unit 2	OAC rule 3745-31-05(A)(3)	Nitrogen oxide compound emissions shall not exceed 7.95 pounds/hour, 29.0 TPY.
		Carbon monoxide emissions shall not exceed 4.11 pounds/hour, 15.0 TPY.
		Organic compound emissions shall not exceed 4.11 pounds/hour, 15.0 TPY.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and OAC 3745-17-10(B)(1).
	OAC rule 3745-17-07(A)(1)	Visible emissions from shack shall not exceed 20% opacity, as a 6 minute average.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pounds/Million BTU which equates to 0.2 pounds per hour, 0.9 TPY.

2. Additional Terms and Conditions

2.a None

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II. Operational Restrictions

1. The maximum annual fuel usage for this emissions unit shall not exceed 90,000,000 cubic feet of natural gas and 4400 tons of liquid fuel, based upon a rolling, 12 month summation of the fuel usage figures.

To ensure enforce ability during the first 12 calendar months of operation, the permittee shall not exceed the fuel usage levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Natural Gas Usage</u>	<u>Maximum Allowable Liquid Fuel Usage</u>
1	7,500,000 cu.ft.	500 tons
1-2	15,000,000 cu.ft.	1000 tons
1-3	22,500,000 cu.ft.	1400 tons
1-4	30,000,000 cu.ft.	1900 tons
1-5	37,500,000 cu.ft.	2500 tons
1-6	45,000,000 cu.ft.	2700 tons
1-7	52,500,000 cu.ft.	2800 tons
1-8	60,000,000 cu.ft.	2933 tons
1-9	67,500,000 cu.ft.	3300 tons
1-10	75,000,000 cu.ft.	3667 tons
1-11	82,500,000 cu.ft.	4033 tons
1-12	90,000,000 cu.ft.	4400 tons

The above table takes into account an 80% shakedown period for the Unit Heater during the first seven months of operation. The 80% is an annual average, not a monthly average.

After the first 12 calendar months of operation, compliance with the annual fuel usage limitation shall be based upon a rolling, 12-month summation of the fuel usage figures.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the fuel usage for each month;
 - b. during the first 12 calendar months of operation, the permittee shall record the cumulative fuel usage for each calendar month; and

- c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the fuel usage figures.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify
 - a. all exceedances of the rolling, 12-month limitation; and
 - b. for the first 12 calendar months of operation, all exceedances of the maximum allowable fuel use levels as shown in the above table of Section A.II.1, "Operational Restrictions".

These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section A.1.

V. Testing Requirements

1. Emissions Limitation:
 7.95 pounds NOX/hour, 29.0 TPY NOX;

Applicable Compliance Method:

General Comments:

NOX emissions are based on flow rates of DMAC, B-Pic, Acetamide and Natural Gas.

Emissions from DMAC:

$$\begin{aligned}
 &(21 \# \\
 &\text{DMAC/hr})(16.1\%N)(46\text{mole.wt.NO}_2/14\text{mol} \\
 &\text{e.wt.N})(15\%\text{conversion}) = 1.67 \# \text{ NOX/hr} \\
 &(184,800 \# \\
 &\text{DMAC/yr})(16.1\%N)(46\text{mole.wt.NO}_2/14\text{mol} \\
 &\text{e.wt.N})(15\%\text{conversion}) / 2000 \\
 &= 7.3 \text{ TPY NOX}
 \end{aligned}$$

Emissions from B-Pic:

$$\begin{aligned}
 &(5 \# \text{ B-pic/hr})(15.1\%N)(46 \text{ mole.wt.NO}_2/14 \\
 &\text{mole.wt.N})(15\% \text{ conversion}) = 0.37 \# \\
 &\text{NOX/hr} \\
 &(44000\# \text{ B-pic/yr})(15.1\%N)(46 \\
 &\text{mole.wt.NO}_2/14 \text{ mole.wt.N})(15\% \\
 &\text{conversion}) / 2000 \\
 &= 1.64 \text{ TPY NOX}
 \end{aligned}$$

Emissions from Acetamide:

$$(30 \text{ \# Acetamide/hr})(23.73\%N)(46 \text{ mole.wt.NO}_2/14 \text{ mole.wt.N})(15\% \text{ conversion}) = 3.51\text{\# NOX/hr}$$

$$(264000 \text{ \# Acetamide/yr})(23.73\%N)(46 \text{ mole.wt.NO}_2/14 \text{ mole.wt.N})(15\% \text{ conversion}) / 2000 = 15.4 \text{ TPY NOX}$$

Emissions from Natural Gas:

Based on the concentration findings during a stack test, dated 6/25/86, on a similar source. (20 ppm NOX)(46 mol.wt.)(60 min/359 scf/mole)(2600 scf) = 0.40 # NOX/hr = 1.75 TPY NOX

Total Emissions from Unit #2 Heater:

$$\text{Total} = 1.67\text{\#} + 0.37\text{\#} + 3.51\text{\#} + 0.40\text{\#} = 5.95\text{\# NOX/hr}$$

$$\text{Total} = 7.3 \text{ tons} + 1.64 \text{ tons} + 15.4 \text{ tons} + 1.75 \text{ tons} = 26.09 \text{ TPY NOX}$$

The liquid fuel organic content varies on an hourly basis, both by concentration and by composition. However, annualized compositions and concentrations of the liquid fuel can be calculated to some degree of accuracy. A safety factor has been added to the annual rate of NOX generation to allow 29.0 TPY NOX emissions. To accommodate the hourly variation, the annual emission limit of 29.0 TPY was back calculated to a 6.62 #/hour rate then a 20% safety factor was added for a limit of 7.95 #/hour. During the initial performance stack test a worst case fuel composition shall be used and hourly allowable emissions rates shall be adjusted accordingly.

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 to 6 months after start up.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for NOX.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 7, 40 CFR Par 60, Appendix A. Alternative

U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- 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.

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

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

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

2. Emissions limitation:
4.11 pounds/hour CO, 15.0 TPY CO;

Applicable Compliance Method:

Based on maximum stack flow from the heater of 2600 scfm, CO stack concentration of 200 ppm, 28 mole.wt. of CO and 359 scf/#mole.

$$(2600 \text{ scfm})(0.0002 \text{ #mole}/359 \text{ scf/\#mole})(28 \text{ mole.wt.CO})(60 \text{ min/hr}) \\ = 2.4 \text{ #CO/hr} = 10.7 \text{ TPY CO.}$$

The liquid fuel organic content varies on an hourly basis, both by concentration and by composition. However, annualized compositions and concentrations of the liquid fuel can be

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calculated to some degree of accuracy. A safety factor has been added to the annual rate of CO generation to allow 15.0 TPY CO emissions. To accommodate the hourly variation, the annual emission limit of 15.0 TPY was back calculated to a 3.42 #/hour rate then a 20% safety factor was added for a limit of 4.11 #/hour.

If required, a stack test shall be conducted using Method 10, 40 CFR Part 60, Appendix A.

3. Emissions Limitation:
 4.11 pounds/hour OC, 15.0 TPY OC

Applicable Compliance Method:

General Comments:

Based on 1991 stack test that showed a destruction efficiency of greater than 99%
 Organic compound emissions are based on flow rates of DMAC, B-Pic, Acetic Acid Acetamide and Natural Gas.

Emissions from DMAC:

$$(21 \text{ \# DMAC/hr})(1 - 99\% \text{ control}) = 0.21\text{\# OC/hr}$$

Emissions from B-Pic:

$$(5 \text{ \# B-pic/hr})(1 - 99\% \text{ control}) = 0.05 \text{ \# OC/hr}$$

Emissions from Acetic Acid:

$$(256 \text{ \# Acetic Acid/hr})(1 - 99\% \text{ control}) = 2.56 \text{ \# OC/hr}$$

Emissions from Acetamide:

$$(30 \text{ \# Acetamide/hr})(1 - 99\% \text{ control}) = 0.3 \text{ \# OC/hr}$$

Emissions from Natural Gas:

From Ap-42, table 1.4-3, dated 1/95,
 emission factor of 5.8 # OC/Million cu.ft.
 $(10,000 \text{ cu.ft. Natural Gas/hr})(5.8 \text{ \# OC/Million cu.ft.}) = 0.058 \text{ \# OC/hr}$

Total Emissions from Unit #2 heater:

$$0.21\text{\#} + 0.05\text{\#} + 2.56\text{\#} + 0.3\text{\#} + 0.058\text{\#} = 3.2\text{\# OC/hr} = 13.9 \text{ TPY OC}$$

The liquid fuel organic content varies on an hourly basis, both by concentration and by composition. However, annualized compositions and concentrations of the liquid fuel can be

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calculated to some degree of accuracy. A safety factor has been added to the annual rate of OC generation to allow 15.0 TPY OC emissions. To accommodate the hourly variation, the annual emission limit of 15.0 TPY was back calculated to a 3.42 #/hour rate then a 20% safety factor was added for a limit of 4.11 #/hour.

If required, a stack test shall be conducted using method 25, 40 CFR Part 60, Appendix A.

4. Emissions limitation:
0.020 pounds of PE/Million BTU which equates to 0.2 pounds per hour PE, 0.9 TPY PE.

Applicable Compliance Method:

These limits were set by converting the OAC rule 3745-17-10(B) limit of 0.02 pounds of PE/Million BTU to pounds/hour to tons/year as follows:

$$(0.020 \text{ pounds of PE/Million BTU})(10 \text{ Million BTU/hr}) = 0.2 \text{ lb PE/hour}$$
$$(0.2 \text{ lb/hour})(8760 \text{ hours/year}) / (2000 \text{ #/ton}) = 0.9 \text{ TPY PE}$$

If required, compliance with the 0.2 lbs PE/hour limit shall be based on stack testing per 40 CFR 60.8, Method 1-5.

VI. Miscellaneous Requirements

None

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>
B014 - Kapton Solvent Recycle Heater unit 2	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

The permit to install for this emissions unit B014 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

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

Pollutant: Acetic Acid

TLV (mg/m³): 24.5

Maximum Hourly Emission Rate (lbs/hr): 5.62

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 48.2

MAGLC (ug/m³): 583

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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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- 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.

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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>
P080 - Kapton Film Manufacturing Line 3 with Thermal Oxidizer	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-11
	OAC rule 3745-17-07(A)
	OAC rule 3745-21-07(G)(1)

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Applicable Emissions
Limitations/Control
Measures

Use of a fabric filter with controlled particulate emissions rate of 0.030 grains/dscf which equates to 2.06 pounds per hour and 9.01 tons per year of particulate emissions. No visible emissions from the fabric filter stack.

Organic compound emissions shall not exceed 2.03 pounds/hour, 7.4 TPY.

Nitrogen oxide emissions shall not exceed 7.12 pounds/hour 26.0 TPY.

Carbon monoxide emissions shall not exceed 5.56 pounds/hour, 20.3 TPY.

Total organic emission shall be reduced by at least 95% overall and be controlled by at least 98% through the use of a thermal oxidizer.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

The organic emissions limit specified by this rule is less stringent than the emissions limit established pursuant to

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

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

The visible particulate emissions from the thermal oxidizer stack shall not exceed 20% opacity, as a 6 minute average.

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2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

1. 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 more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
2. There shall be no visible emissions (0% opacity, as a 6-minute average) from the bag filter serving the Casting Film Chopper Conveying System, while the system is in operation. The Casting Film Chopper Conveying System can operate independently of the Casting Line.

III. Monitoring and/or Recordkeeping Requirements

1. 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 Centigrade. 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 for each day:

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit (Film Casting Line) was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device (thermal oxidizer system), and monitoring equipment, when the associated emissions unit (Film Casting Line) was in operation.
2. The permittee shall perform checks on the bag filter on a per-shift basis, when the emissions unit (Casting Film Chopper Conveying System) is in operation, and when the weather conditions

Emissions Unit ID: P080

allow. The permittee shall check for any visible particulate emissions (excluding uncombined water vapor) from the conveying air exhaust of the bag filter serving this emissions unit and for visible fugitive particulate emissions from any part of this emissions unit. The presence or absence of any visible particulate emissions shall be recorded electronically or in an operations log. If visible particulate emissions are observed, the permittee shall also record the following:

- a. the color of the emissions;
- b. the total duration of any visible emission incident; and
- c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly written reports which identify:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer does not comply with the temperature limitation specified above, when the emissions unit (Film Casting Line) is running;
 - b. All days during which any visible particulate emissions were observed from the conveying air exhaust of the bag filter serving this emissions unit (Casting Film Chopper Line);
 - c. All days during which any visible fugitive particulate emissions were observed from any part of the emissions unit (Casting Film Chopper Line) or control equipment, and
 - d. Any corrective actions taken to eliminate the visible particulate emissions (Casting Film Chopper Line).

V. Testing Requirements

1. Emissions Limitation:
 0.030 grains/dscf which equates to 2.06 pounds per hour and 9.01 tons per year particulate emissions (PE);

Applicable Compliance Method:

These limits were calculated by converting the bag filter manufacture's guarantee to meet Best Available Technology (BAT) emission requirement of 0.030 grains/dscf to pounds/hour to tons/year as follows:

$$(0.030 \text{ gr/dscf})(8000 \text{ dscf/minute})(60 \text{ min/hr}) / (7000 \text{ gr/lb}) = 2.06 \text{ lb PE/hour}$$

$$(2.06 \text{ lb/hour})(8760 \text{ hours/year}) / (2000 \text{ \#/ton}) = 9.01 \text{ TPY PE}$$

If required, compliance with the 2.06 lbs PE/hour limit shall be based on stack testing per 40

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CFR 60.8, Methods 1-5.

2. Emissions Limitation:
2.03 pounds per hour OC, 7.4 TPY OC;

Applicable Compliance Method:

Organic emissions come from the DMAC, B-Pic and Acetic Acid of the process and some fugitive emissions. Emissions limits were derived from flow rates. The flow rates for DMAC and B-Pic are based on actual CEM data from a similar unit, projected to a higher flow rate. Acetic Acid emissions are based on modeling studies. Fugitive emissions were based on OSHA studies of employee exposure.

Emissions from DMAC and B-Pic:

Based on thermal oxidizer manufacture's guarantee of at least 98% destruction efficiency.
 $(16.62 \text{ # DMAC/hr} + 11.7 \text{ # B-Pic/hr})(1-0.98 \text{ control}) = 0.57 \text{ # OC/hr} = 2.48 \text{ TPY OC}$

Emissions from Acetic Acid:

$(0.20 \text{ # Acetic Acid/hr})(1-0.98 \text{ control}) = 0.004 \text{ # OC/hr emitted} = 0.02 \text{ TPY OC}$

Emission from Fugitive Emissions:

PPM data was estimated from OSHA employee exposure readings.

$(0.26 \text{ ppm DMAC})(55,000 \text{ cfm})(60 \text{ min/hr})(1\text{-mole}/359 \text{ scf})(87 \text{ molecular wt./mole.}) = 0.21 \text{ # OC/hr}$

$(0.05 \text{ ppm B-Pic})(55,000 \text{ cfm})(60 \text{ min/hr})(1\text{-mole}/359 \text{ scf})(87 \text{ molecular wt./mole.}) = 0.04 \text{ # OC/hr}$

$(1.06 \text{ ppm Acetic Acid})(55,000 \text{ cfm})(60 \text{ min/hr})(1\text{-mole}/359 \text{ scf})(60 \text{ molecular wt./mole.}) = 0.58 \text{ # OC/hr}$

Total Emissions from Thermal Oxidizer and Fugitives:

$0.57 \text{ #} + 0.004 \text{ #} + 0.21 \text{ #} + 0.04 \text{ #} + 0.58 \text{ #} = 1.4 \text{ # OC/hour actual potential emissions} = 6.1 \text{ TPY OC}$

The liquid fuel organic content varies on an hourly basis, both by concentration and by composition. A safety factor has been added to the annual rate of OC generation to allow 7.4 TPY OC emissions. To accommodate the hourly variation, the annual emission limit of 7.4 TPY was back calculated to a 1.69 #/hour rate then a 20% safety factor was added for a limit of 2.03 #/hour.

If required, a stack test shall be conducted using method 25, 40 CFR Part 60, Appendix A.

3. Emissions Limitation:
Reduce organic emission by at least 95% through the use of a thermal oxidizer;

Applicable Compliance Method:

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 to 6 months after start up.
- b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic emission.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25, 40 CFR Part 60, Appendix A - if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- 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.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to

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Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

4. Emissions Limitation:
7.12 pounds/hour NOX, 26.0 TPY NOX;

Applicable Compliance Method:

NOX emissions come from DMAC, B-Pic, and natural gas combustion. Emissions limits were derived from calculating the stoichiometric formation of NOX and the flow rates. The flow rates for DMAC and B-Pic are based on actual test data from a similar unit. Natural gas emissions were based on unit's maximum gas usage. The 30% conversion to NOX is based on a pilot test of a similar unit using EPA approved methods.

Emissions from DMAC:

$$(16.62 \text{ \# DMAC/hr})(16.1\% \text{ N})(46 \text{ mole.wt.NO}_2/14 \text{ mole.wt.N})(30\% \text{ conversion to NOX}) \\ = 2.64 \text{ \# NOX/hr}$$

Emissions from B-Pic:

$$(11.7 \text{ \#B-Pic/hr})(15.1\% \text{ N})(46 \text{ mole.wt.NO}_2/14 \text{ mole.wt.N})(30\% \text{ conversion to NOX}) = \\ 1.74 \text{ \# NOX/hr}$$

Emissions from Natural Gas:

$$\text{Based on AP-42 Table 1.4-2} \\ (5600 \text{ cft/hr})(81\#/10^6\text{cft}) = 0.45\# \text{ NOX/hr}$$

Total Emissions from thermal oxidizer:

$$2.64\# + 1.74\# + 0.45\# = 4.83\# \text{ NOX/hr} = 21.1 \text{ TPY actual potential NOX emissions}$$

The liquid fuel organic content varies on an hourly basis, both by concentration and by composition. A safety factor has been added to the annual rate of NOX generation to allow 26.0 TPY OC emissions. To accommodate the hourly variation, the annual emission limit of 26.0 TPY was back calculated to a 5.94 #/hour rate then a 20% safety factor was added for a limit of 7.12 #/hour. During the initial performance stack test a worst case fuel composition shall be used and hourly allowable emissions rates shall be adjusted accordingly.

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

- a. The emission testing shall be conducted within 3 months to 6 months after start up.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for NOX.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 7, 40 CFR Par 60, Appendix A. - if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- 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.

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

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

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

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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.

5. Emissions Limitation:
5.56 pounds/hour CO, 20.3 TPY CO.

Applicable Compliance Method:

CO Emissions from Natural Gas:

Based on AP-42 Table 1.4-2, 1/95.

$$(5600 \text{ cft/hr})(61\#\text{CO}/10^6 \text{ cft}) = 0.34 \# \text{ CO/hr} = 1.5 \text{ TPY CO}$$

CO Emissions from process organics:

Process experience with other units indicates that CO concentrations in stack gasses range up to 150 ppm. Maximum stack exhaust gas flow rate is 5000 scfm.

$$(5000 \text{ scfm exhaust gas})(0.00015 \text{ scft CO}/1\text{scft exhaust gas})(1 \text{ lb-mole}/359 \text{ scft})(28\# \text{ CO}/\text{lb mole})(60 \text{ min/hr}) = 3.5\# \text{ CO/hr} = 15.4 \text{ TPY CO}$$

Total CO Emissions from Natural Gas and OCs:

$$0.34 \# + 3.5\# = 3.84 \# \text{ CO/hr} = 16.9 \text{ TPY CO}$$

The liquid fuel organic content varies on an hourly basis, both by concentration and by composition. A safety factor has been added to the annual rate of CO generation to allow 20.3 TPY CO emissions. To accommodate the hourly variation, the annual emission limit of 20.3 TPY was back calculated to a 4.63 #/hour rate then a 20% safety factor was added for a limit of 5.56 #/hour.

If required, a stack test shall be conducted using Method 10, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

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>
P080 - Kapton Film Manufacturing Line 3 with thermal oxidizer	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

The permit to install for this emissions unit P080 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

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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: Dimethylacetamide (DMAC)

TLV (mg/m³): 35.63

Maximum Hourly Emission Rate (lbs/hr): 2.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 114

MAGLC (ug/m³): 848

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.).

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.

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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.

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>
P081 - Kapton Solvent Recycle Distillation Columns unit 2 with packed scrubber	OAC rule 3745-31-05(A)(3) OAC rule 3745-21-07(G)(2)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2). Organic compound emissions shall not exceed 8 pounds per hour, 40 pounds per day and 7.3 tons per year.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

1. The scrubber water flow rate shall be maintained at a value of not less than 0.25 gallons per minute at all times while the emissions unit (Solvent Recycle Distillation Columns, Unit 2) is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the scrubber water flow rate while the emissions unit (Solvent Recycle Distillation Columns, Unit 2) 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:

- a. The scrubber water flow rate, in gallons per minute, on a per shift basis.

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- b. The down time for the capture (collection) system and control device (Packed Bed Scrubber) and monitoring equipment when the associated emissions unit (Solvent Recycle Distillation Columns, Unit 2) is in operation.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - a. The scrubber water flow rate as described in Part 1 - General Terms and Conditions of this permit under section A.1.

V. Testing Requirements

1. Emission Limitation

8#OC/hr, 40 #OC/day, 7.3 TPY OC

Applicable Compliance Method

General Comments:

Fugitive emissions were estimated from OSHA employee exposure readings. Fugitive sources include seals, valves and sampling points.

Stack Emissions:

Actual emissions based on the results of stack test on P024 in December, 1991, were 0.37 # OC/hr which equates to 8.88# OC/day and 1.6 TPY OC.

Fugitive emissions from B-Pic:

$(93 \text{ mole.wt. of B-Pic})(2 \text{ ppm tlv})(5\%)(10 \text{ sources})(60 \text{ min}/359\text{scf/mole})(440 \text{ scfm}) = 0.01\# \text{ OC/hr}$

Fugitive emissions from Acetic Acid:

$(60 \text{ mol.wt. of Acetic Acid})(10 \text{ pmm tlv})(5\%)(20 \text{ sources})(60 \text{ min}/359\text{scf/mole})(440 \text{ scfm}) = 0.04\# \text{ OC/hr}$

Fugitive emissions from DMAC:

$(87 \text{ mol.wt. of DMAC})(10 \text{ pmm tlv})(5\%)(20 \text{ sources})(60 \text{ min}/359\text{scf/mole})(440 \text{ scfm}) = 0.06\# \text{ OC/hr}$

Fugitive emissions from Toluene:

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(92 mol.wt. of Toluene)(50 pmm tlv)(5%)(10 sources)(60 min/359scf/mole)(440 scfm) = 0.17#
OC/hr

Total Emissions (stack and fugitive)

$0.37\# + 0.01\# + 0.04\# + 0.06\# + 0.17\# = 0.65 \# \text{ OC/hr} = 15.6 \# \text{ OC/day} = 2.8 \text{ TPY OC}$

If required, a stack test shall be conducted using Method 18, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

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>
P081 - Kapton Solvent Recycle Distillation Columns unit 2 with packed scrubber	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

The permit to install for this emissions unit P081 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

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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: Toluene

TLV (mg/m³): 188.4

Maximum Hourly Emission Rate (lbs/hr): 1.15

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 36

MAGLC (ug/m³): 4486

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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

NEW SOURCE REVIEW FORM B

PTI Number: 01-08064 Facility ID: 0165010004

FACILITY NAME E I DuPont De Nemours & Co

FACILITY DESCRIPTION Film line 3; recycle unit 2; recycle unit 2 CITY/TWP Circleville
header.

SIC CODE 3089 SCC CODE 1-02-006-02 EMISSIONS UNIT ID B005

EMISSIONS UNIT DESCRIPTION Power Vaporizer 1

DATE INSTALLED 6/53

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter			0.07	0.04	0.22
PM ₁₀					
Sulfur Dioxide			0.01	0.005	0.03
Organic Compounds					
Nitrogen Oxides			3.14	0.86	4.8
Carbon Monoxide			0.06	0.18	1.0
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES: OAC 3745-31-05(D), OAC 3745-31-05(A), OAC 3745-07-07(A)(1)

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Natural Gas only, operational restrictions for netting purposes

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 01-08064 Facility ID: 0165010004

FACILITY NAME E I DuPont De Nemours & Co

FACILITY DESCRIPTION Film line 3: recycle unit 2: recycle unit 2 CITY/TWP Circleville

Emissions Unit ID: P081

SIC CODE 3089 SCC CODE 1-02-006-02 EMISSIONS UNIT ID B006

EMISSIONS UNIT DESCRIPTION Power Vaporizer 2

DATE INSTALLED 6/53

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter			0.08	0.04	0.22
PM ₁₀					
Sulfur Dioxide			0.02	0.005	0.03
Organic Compounds					
Nitrogen Oxides			3.51	0.86	4.8
Carbon Monoxide			0.07	0.18	1.0
Lead					
Other: Air Toxics					

OAC 3745-31-05(D), OAC 3745-31-05(A), OAC 3745-07-07(A)(1)

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Natural Gas only, operational restrictions for netting purposes

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES X NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SOURCE REVIEW FORM B

PTI Number: 01-08064

Facility ID: 0165010004

FACILITY NAME E I DuPont De Nemours & Co

FACILITY DESCRIPTION Film line 3: recvle unit 2: recvle unit 2 CITY/TWP Circleville

Emissions Unit ID: P081

SIC CODE 3089

SCC CODE 1-02-006-02

EMISSIONS UNIT ID B007

EMISSIONS UNIT DESCRIPTION Power Vaporizer 3

DATE INSTALLED 6/58

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter			0.08	0.04	0.22
PM ₁₀					
Sulfur Dioxide			0.02	0.005	0.03
Organic Compounds					
Nitrogen Oxides			3.51	0.86	4.8
Carbon Monoxide			0.07	0.18	1.0
Lead					
Other: Air Toxics					

OAC 3745-31-05(D), OAC 3745-31-05(A), OAC 3745-07-07(A)(1) APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Natural Gas only, operational restrictions for netting purposes

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 01-08064 Facility ID: 0165010004

FACILITY NAME E I DuPont De Nemours & Co

FACILITY DESCRIPTION Film line 3: recycle unit 2: recycle unit 2 CITY/TWP Circleville

Emissions Unit ID: P081

SIC CODE 3089 SCC CODE 3-99-999-94 EMISSIONS UNIT ID B014

EMISSIONS UNIT DESCRIPTION Kapton Solvent Recycle Heater unit 2

DATE INSTALLED 6/2000

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter				0.2	0.9
PM ₁₀					
Sulfur Dioxide					
Organic Compounds		3.2	13.9	4.11	15.0
Nitrogen Oxides		5.95	26.09	7.95	29.0
Carbon Monoxide		2.4	10.7	4.11	15.0
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

OAC 3745-31-05(A)(3), OAC 3745-17-07(A)(1), OAC 3745-17-10(B)

NPSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination operational restrictions for netting purposes

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES X NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SC

PTI Num

FACILITY

Emissions Unit ID: P081

FACILITY DESCRIPTION Film line 3; recycle unit 2; recycle unit 2 header.

CITY/TWP Circleville

SIC CODE 3089 SCC CODE 3-99-999-94 EMISSIONS UNIT ID P080

EMISSIONS UNIT DESCRIPTION Kapton Film Manufacturing Line 3 with thermal oxidizer

DATE INSTALLED 6/2000

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter				2.06	6.0
PM ₁₀					
Sulfur Dioxide					
Organic Compounds		1.4	6.1	2.03	7.4
Nitrogen Oxides		4.83	21.1	7.12	26.0
Carbon Monoxide		3.84	16.9	5.56	20.3
Lead					
Other: Air Toxics					

OAC 3745-31-05(A)(3) OAC 3745-21-07(G)(1), OAC 3745-17-11, OAC 3745-17-07(A) APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 0.020grains/dscf with a fabric filter, 95% overall control and 98% destruction efficiency with a thermal oxidizer

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES X NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SOURCE REVIEW FORM B

PTI Number: 01-08064 Facility ID: 0165010004

FACILITY NAME E I DuPont De Nemours & Co

FACILITY DESCRIPTION Film line 3: recvcle unit 2: recvcle unit 2 CITY/TWP Circleville

Emissions Unit ID: P081

SIC CODE 3089 SCC CODE 3-99-999-94 EMISSIONS UNIT ID P081

EMISSIONS UNIT DESCRIPTION Kapton Solvent Recycle Distillation Columns unit 2 with packed scrubber

DATE INSTALLED 6/2000

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds		0.65	2.8	8.0	7.3
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

OAC rule 3745-31-05(A)(3) and OAC rule 3745-21-07(G)(2) APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Organic compound emissions shall not exceed 8 pounds/hour; 40 pounds/day; 7.3 TPY through the use of a packed scrubber.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES X NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SOURCE REVIEW FORM B

PTI Number: 01-08064

Facility ID: 0165010004

FACILITY NAME E I DuPont De Nemours & Co

FACILITY DESCRIPTION Film line 3: recvcle unit 2: recvcle unit 2 CITY/TWP Circleville

Emissions Unit ID: P081

Please describe any hard copy information is being submitted with this recommendation (Please send hard copy information to Pam McGraner, DAPC Central Office - Air Quality Modeling and Planning):

Netting Application, Stack Test on fuel containing bound nitrogen

Please provide any additional permit specific notes as you deem necessary:

New Source Review

B. General Information:

DuPont plans to install a new film manufacturing line, solvent recycle distillation unit and solvent recycle unit heater. The facility produces plastic film used for package wrapping and other industrial applications such as gasket and plastic parts. In order to avoid PSD for NOX emissions, Dupont has chosen to net NOX emissions.

C. Applicable Rules:

Dupont is a Title V facility. The new emissions units do not apply to the MACT rules or NSPS rules. PSD applies but Dupont had chosen to net out of PSD by reducing the NOX limits for units B005, B006 and B007 (see PTI), by shutting down units B008, B012 and P070 (see netting write up) and by placing annual limitations on B014 (see PTI). The facility will show compliance with applicable rules either based on calculations or stack tests, (see Testing Requirements sections for each emissions unit).

D. Calculations:

See Testing Requirements sections for all calculations.

E. Fee Explanation:

P080 PWR = 0-1000 #/hr	200
P081 PWR = 1000-5000#/hr	400
B014 10-99mmBTU	400
B005 0-9 mmBTU natural gas only	100
B006 0-9 mmBTU natural gas only	100
B007 0-9 mmBTU natural gas only	100
Total	1300

Permit To Install Netting Write-Up

E. I. DuPont de Nemours & Co., Inc.

Netting Calculations

A. Source Description:

DuPont plans to install a new film manufacturing line, solvent recycle distillation unit and solvent recycle unit heater. The facility produces plastic film used for package wrapping and other industrial applications such as gasket and plastic parts.

B. Facility Emissions/Attainment Status:

Total facility emissions according to the 1998 Fee Emissions Report are as follows:

FACILITY DESCRIPTION Film line 3; recycle unit 2; recycle unit 2
header.

CITY/TWP Circleville

PM	163.29 TPY	Attainment
SO2	0.34 TPY	Attainment
NOX	106.68 TPY	Attainment
OC	631.64 TPY	Attainment

C. Existing Unit Emissions:

Actual NOX Emissions for:	1998 FER	1997 FER	average
B005	3.14 TPY	3.14 TPY	3.14 TPY
B006	3.51 TPY	3.51 TPY	3.51 TPY
B007	3.51 TPY	3.51 TPY	3.51 TPY
B008	5.26 TPY	5.26 TPY	5.26 TPY
B012	3.47 TPY	3.47 TPY	3.47 TPY
P070	0.46 TPY	1.85 TPY	1.16 TPY
			Total = 20.05 TPY

D. Emission Reductions for credit:

Emissions unit	Amount of Reductions	Cause of Reduction
B005	1.54 TPY	federally enforceable limit
B006	1.91 TPY	federally enforceable limit
B007	1.91 TPY	federally enforceable limit
B008	5.26 TPY	shut down prior to start up
B012	3.47 TPY	shut down prior to start up
P070	1.16 TPY	shut down prior to start up
	Total = 15.25 TPY	

E. Proposed New Emissions:

P080	26.0 TPY NOX
B014	29.0 TPY NOX
Total	55.0 TPY NOX

F. Net Increase of Emissions:

Increase = new emissions - reductions = 55.0 - 15.25 = 39.75 TPY < 40 TPY NOX PSD limit

G. Contemporaneous Emissions Increase and Decreases:

Several PTIs were issued to DuPont within the last 5 years however NOX emissions were not included in any that I found.

H. Conclusion:

The installation of the new film manufacturing line, solvent recycle distillation unit and solvent recycle heater will

6 NEW SOURCE REVIEW FORM B

PTI Number: 01-08064

Facility ID: 0165010004

FACILITY NAME E I DuPont De Nemours & Co

FACILITY DESCRIPTION Film line 3: recvcl unit 2: recvcl unit 2 CITY/TWP Circleville

Emissions Unit ID: P081

result in a net increase in NOX emissions of 39.75 TPY. Therefore, the new installation have "netted out" of PSD for NOX emissions.

Please fill in the following for this permit:

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	7.12
OC	29.7
NOX	59.8
SO2	0.3
CO	36.0