

Synthetic Minor **Determination and/or** Netting Determination

Permit To Install **02-20685**

A. Source Description

Avery Dennison Corporation is constructing its World Headquarters on a new site in the Newell Creek Development, 8195-97 Garfield Road, Mentor, Ohio 44060, in Lake County. The Headquarters project will include an office building and a research building connected by an atrium for food service. The research building will include a pilot coater, which requires a permit to install and ancillary support equipment. Avery Dennison operates under SIC code 2672 and the pilot coater will serve the research and product development needs of its paper and film coating businesses in the United States and throughout the world.

The Headquarters Pilot Coater is the primary emission unit, which is a paper and film coating line that includes a natural gas-fired drying oven, coating applicators and cleanup solvents. The facility will also include a small natural gas-fired boiler (<10 MMBtu/hr) and small storage vessels that are exempt from permitting pursuant to OAC rule 3745-31. The Headquarters facility with the pilot coater and its ancillary insignificant units will keep facility-wide emissions below the 100-ton major source threshold for volatile organic compounds (VOC). While actual emissions are expected to be far below this threshold, Ohio EPA policy directs that we calculate potential to emit using the worst-case coating at the maximum number of operating hours for this emission unit. The pilot coater cannot serve its research and development purpose operating with one worst-case coating all the time. Nonetheless, for the purpose of expediting the permit processing, Avery is willing to accept a synthetic minor limit for the pilot coater at 90 tons VOC per year, which includes VOC from coating use, cleanup material, and natural gas combusted in the drying oven and a small natural gas-fired boiler (<10 MMBtu/hr).

B. Facility Emissions and Attainment Status

The Headquarters Pilot Coater, Ohio EPA unit number K001, will be restricted to 90 tons per year Volatile Organic Compounds (VOCs) through this permit to install. Avery requests synthetic minor permit terms to help ensure that annual facility-wide VOC emissions stay below the 100-ton major source threshold to avoid nonattainment new source review (NNSR). Lake County is currently non-attainment for the eight-hour ozone standard and PM2.5. The potential to emit for all criteria pollutants other than VOC are well below the major source thresholds (see revised emission calculation worksheet (May 2005) submitted in response to Ohio EPA's request for information). Therefore, the only synthetic minor limit necessary is the K001 VOC limit of 90 tpy, which will be enforced on a 12-month rolling average basis.

Synthetic minor limits are not being used to restrict HAP emissions. Therefore, the Headquarters Pilot Coater will be a major HAP source subject to applicable Maximum Achievable Control Technology standards including the Part 63, Subpart JJJJ, Paper Coating MACT standard.

C. Source Emissions

The Headquarters Pilot Coater (K001) will be restricted to 90 tons of VOC per year. Of this amount, 0.47 tpy of VOC is attributable to the maximum amount of natural gas that can be combusted at the drying oven assuming a rated heat input capacity of 20 MMBtu/hr and the AP-42 emission factor for VOC from natural gas combustion of 5.5 lb/mmcf. The small gaseous-fired boiler (<10 MMBtu/hr) contributes just 0.14 tpy VOC at maximum rated heat input capacity to the 90 tpy facility-wide synthetic minor limit. The remaining 89.39 tpy is

attributable to coatings applied (88.16 tpy) and cleanup materials (1.23 tpy) used at the pilot coater. VOC emissions from coatings and cleanup solvents will be tracked and summed monthly using the VOC content of each material used and the amount of material used each month. The VOC content of coatings and cleanup materials will be determined based on tests using Modified Method 8260A, Method 24 or another method approved by the Director. These tests may be conducted by Avery or provided by the material supplier. Avery may also rely on formulation data to establish VOC content of coatings or cleanup material to the extent allowed by law. Avery will restrict material usage, to the extent needed, to stay below the annual VOC limit on a 12-month rolling average basis. The drying oven and the boiler VOC emissions from natural gas combustion are 0.47 and 0.14 tons respectively at maximum heat input capacity for 8,760 hours. Therefore, these emissions will not be a factor in demonstrating compliance with the annual VOC synthetic minor limit. Actual emissions from the drying oven and boiler can be calculated, if necessary, based on monthly natural gas usage and the published natural gas emission factor in AP-42.

Avery Dennison intends to limit VOC emissions from the Pilot Coater by complying with the restrictions in this synthetic minor PTI. For the first 12 months of operation, the monthly VOC emission limit from the Pilot Coater (including oven emissions from natural gas combustion) will be:

Month 1 = 24 tpy
Month 2 = 30 tpy
Month 3 = 36 tpy
Month 4 = 42 tpy
Month 5 = 48 tpy
Month 6 = 54 tpy
Month 7 = 60 tpy
Month 8 = 66 tpy
Month 9 = 72 tpy
Month 10 = 78 tpy
Month 11 = 84 tpy
Month 12 = 90 tpy

At the end of the first 12 months, compliance will be demonstrated using a 12-month rolling summation of the monthly VOC emissions from the Pilot Coater.

D. Conclusion

Through coating and cleanup material use restrictions in this PTI, total facility-wide potential VOC emissions will be limited to 90 tons per year. This includes: 0.47 tpy of VOC from the natural gas burned at the K001 oven at maximum capacity; and the remaining 89.53 tpy of VOC from the coating and cleanup materials used at the Pilot Coater. Permit terms requiring monthly records of material usage and VOC content for coating and cleanup materials will be sufficient to demonstrate compliance with the 90 tpy synthetic minor VOC limit on a rolling 12-month basis. The permit will ensure that this facility's potential to emit stays comfortably below the Nonattainment New Source Review (NNSR) major source level of 100 TPY for VOCs and for all other criteria pollutants.



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

Street Address:

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

Mailing Address:
Lazarus Gov.
Center

Application No: 02-20685

Fac ID: 0243081365

DATE: 7/7/2005

Avery Dennison Corp.
Stephen Gittins
7590 Auburn Rd.
Painesville, OH 44077

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$500** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern

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

CC: USEPA

NEDO

PA

LAKE COUNTY

PUBLIC NOTICE

**ISSUANCE OF DRAFT PERMIT TO INSTALL 02-20685 FOR AN AIR CONTAMINANT SOURCE FOR
Avery Dennison Corp.**

On 7/7/2005 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Avery Dennison Corp.**, located at **8195 Garfield Rd., Mentor, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 02-20685:

Pilot coater.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Dennis Bush, Ohio EPA, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087
[(330)425-9171]

**Permit To Install
Terms and Conditions**

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

DRAFT PERMIT TO INSTALL 02-20685

Application Number: 02-20685
Facility ID: 0243081365
Permit Fee: **To be entered upon final issuance**
Name of Facility: Avery Dennison Corp.
Person to Contact: Stephen Gittins
Address: 7590 Auburn Rd.
Painesville, OH 44077

Location of proposed air contaminant source(s) [emissions unit(s)]:
**8195 Garfield Rd.
Mentor, Ohio**

Description of proposed emissions unit(s):
Pilot coater.

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

Avery Dennison Corp.

Facility ID: 024308136

PTI Application: 02-20685

Issued: To be entered upon final issuance

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

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reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.8 below if no deviations occurred during the quarter.

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

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

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

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain,

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the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

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

6. General Requirements

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

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7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

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8. Federal and State Enforceability

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

9. Compliance Requirements

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

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the Ohio EPA. Progress reports shall contain the following:

- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
- ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

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13. Permit-To-Install

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

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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 shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

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

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of

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installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

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

6. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

7. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

8. 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

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quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

Avery Dennison Corp.**Facility ID: 024308136****PTI Application: 02-20685****Issued: To be entered upon final issuance****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> |
|------------------|----------------------|
| VOC | 90.0 |
| NOx | 10.5 |
| CO | 8.4 |

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Facility ID: 024308136

Avery

PTI A

Emissions Unit ID: K001

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

**Avery
PTI A**

Emissions Unit ID: K001

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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> |
|--|--|
| K001 - A research and development headquarters pilot coater K001 [with associated web unwind station, application coating stations, web treatment units, direct fired drying ovens (with maximum combined heat capacity of 16 MmBtu/hr) web rewind station, and storage tanks. | OAC rule 3745-31-05 (A) (5) OAC rule 3745-31-05(C) OAC rule 3745-21-09 (F) 40 CFR Part 60, Subpart RR 40 CFR Part 63, Subpart JJJJ (Boilers and Process Heaters) 40 CFR Part 63, Subpart JJJJ (Paper and Other Web Coating) |

**Avery
PTI A**

Emissions Unit ID: K001

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| Applicable Emissions Limitations/Control Measures | mass weighted average for each month. |
|---|--|
| 410 pounds of volatile organic compounds (VOCs) per hour, including cleanup, as a daily average | The permittee shall not discharge organic HAP emissions into the atmosphere of more than 1.6 percent of the total mass of coating applied or more than 8 percent of the total mass of coating solids applied calculated for each month. (See Section A.1.2.a.) |
| 2.0 pounds per hour and 8.76 tons per year of nitrogen oxides (NOx) emissions from the ovens (See section A.1.2.c) | (See Section A.1.2.b. of these terms and conditions) |
| 1.6 pounds per hour and 7.0 tons per year of carbon monoxide (CO) emissions from the ovens (See section A.1.2.c) | |
| 90.0 tons VOC per rolling 12-month period including coatings and cleanup materials | |
| The VOC content for any coating employed in this emissions unit shall not exceed 2.9 pounds per gallon, as applied excluding water and exempt solvents. | |
| The permittee shall not discharge VOC emissions into the atmosphere of more than 0.2 kg of VOC per of coating solids applied, calculated as a | |

2. Additional Terms and Conditions

- 2.a The total monthly HAP, applied shall be determined by Equation 6 of Section 63.3370 of 40 CFR Part 63, Subpart JJJJ, as follows:

$$H_m = \sum_{i=1}^p C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} - M_{vret}$$

where:

H_m = Total monthly organic HAP applied, kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i , as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j , added to as-purchased coating material, i , expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j , added to as-purchased coating material, i , in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

- 2.b The natural gas boiler for process heat for this emissions unit is less than 10 MmBtu per hour and is classified in the "small gaseous fuel category" as defined in the Boiler MACT and is an affected source. According to section 63.7506(c)(4), there are no applicable requirements, including initial notification for this boiler.
- 2.c The Best Available Technology determination for this emissions unit includes the use of only natural gas, as fuel.

In addition, because the annual limits for NO_x and CO from this PTI are based on the maximum potential to emit, no monitoring or record keeping of the gas usage is required.

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- 2.d** Ozone is emitted from the corona treaters on this coating line in quantities less than 1.0 ton per year. Because at this time there are no applicable requirements for ozone, no emission limitations have been included in this permit.
- 2.e** The permittee shall comply with all applicable requirements in the MACT for Paper and other Web Coating, 40 CFR Part 63, Subpart JJJJ.

And, if this MACT is substantially revised then the permittee is expected to comply with the newly revised applicable requirements of the MACT and must submit a minor modification to the Title V permit, as required.

II. Operational Restrictions

- The permittee shall install and use low NOx burners in the drying ovens.
- The weight of VOCs applied/used in this emissions unit shall not exceed 99.7 tons per rolling 12 months, calculated using the following formula:

$$90.0 \text{ tons VOC} \geq \sum_{i=1}^n \frac{(P_i)(VOC_i)}{2000 \text{ lbs/ton}} + (1.23 + 0.14 + 0.47)$$

where:

P_i = usage of the coating and cleanup material i , in gallons during the last 12 months

VOC_i = volatile organic compound content of coating i , cleanup material i , in pounds per gallon.

To ensure enforceability during the first twelve (12) calendar months of operation following the effective date of this permit to install, VOC emissions from this emissions unit, Ohio EPA emissions unit K001, shall not exceed the emissions levels specified in the following table:

| Month (after issuance) | Cumulative VOC emissions (including cleanup) tons per year |
|---------------------------|--|
| 1 | 24 |
| 2 | 30 |
| 3 | 36 |
| 4 | 42 |
| 5 | 48 |
| 6 | 54 |

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| | |
|----|----|
| 7 | 60 |
| 8 | 66 |
| 9 | 72 |
| 10 | 78 |
| 11 | 84 |
| 12 | 90 |

After the first 12 calendar months of operation following the issuance of this permit, compliance shall be based upon a rolling, 12-month summation of the VOC emissions.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. the name and identification number of each coating and cleanup material employed;
 - b. the VOC content of each coating and cleanup material employed for each day, in pounds per gallon;
 - c. the number of gallons of each coating and cleanup material employed for each day;
 - d. the total VOC emissions from all coatings and cleanup materials for each day, in pounds and tons per day;
 - e. the total VOC emissions from all coatings and cleanup materials, to date, in tons per month;
 - f. the rolling 12-month VOC emissions from all coatings and cleanup materials, in tons;
 - g. the total number of hours the emissions unit was in operation for each day, in hours per day; and
 - h. the daily average hourly VOC emission rate from all coatings and cleanup materials employed, [(d)/(g)], in pounds per hour (daily average).

2. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The name and identification number of each coating employed;
 - b. The weighted average of the mass of solvent (VOC) used per mass of coating solids applied, in kg VOC/kg coating solids applied, calculated in accordance

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with the equation in section 60.443(a)(2) of 40 CFR 60, Subpart RR, and as follows:

- i. The weight fraction of volatile organic compounds and the weight fraction coating solids of each coating applied shall be determined by 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data. In accordance with the USEPA's written approval of February 11, 1998, Headspace Gas Chromatograph Technique modified Method 8260A may be used to determine the VOC content of the water-based coatings, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A.

- ii. The weighted average shall be calculated using the following equation:

$$G = (TWM_o) / (TWM_s)$$

Where

TWM_o = the sum, from $i = 1$ to $i = n$, of $(W_{oi} \times M_{ci})_i$

TWM_s = the sum, from $i = 1$ to $i = n$, of $(W_{si} \times M_{ci})_i$

i = subscript denoting an individual coating

n = the number of different coatings employed

M_{ci} = the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records

W_{oi} = the weight fraction of volatile organic compounds of each coating (i) applied during the calendar month as determined by Reference Method 24 or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data.

W_{si} = the weight fraction of coating solids of each coating (i) applied during the calendar month as determined by Reference Method 24 or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data.

3. The permittee shall collect and record the following information each month for this emissions unit:

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- a. The name and identification number of each coating employed;
- b. The average of the mass of HAP emissions per mass of coating solids applied, in kg HAP/kg coating solids applied, calculated in accordance with the equations in section 63.3370(c)(4) of 40 CFR 63, Subpart JJJJ, and as follows:
 - i. If required, the weight fraction of HAP and the weight fraction coating solids of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311, 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data, if approved by U.S. EPA.
 - ii. The average shall be calculated using the following equation:

Where:

H_s = Monthly average, as-applied, organic HAP to coating solids ratio, kg organic HAP/kg coating solids applied.

p = Number of different coating materials applied in a month.

χ_i = Organic HAP content of coating material, i , as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

q = Number of different materials added to the coating material.

χ_{ij} = Organic HAP content of material, j , added to as-purchased coating material, i , expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j , added to as-purchased coating material, i , in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §§ 63.3370.

C_{si} = Coating solids content of coating material, i , expressed as a mass fraction, kg/kg.

C_{sij} = Coating solids content of material, j , added to as-purchased coating material, i , expressed as a mass-fraction, kg/kg.

- c. The average of the mass of HAP emissions per mass of coating applied, in kg HAP/kg coating solids applied, calculated in accordance with the equations in section

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 63.3370(c)(4) of 40 CFR
 63, Subpart JJJJ, and as
 follows:

$$\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}$$

- i. If required, the weight fraction of HAP and the weight fraction coating of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311, 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data.

- ii. The average shall be calculated by the following formula:
 Where:
 HL = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as kg organic HAP per kg of coating material applied, kg/kg.
 p = Number of different coating materials applied in a month.
 Chi = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.
 Mi = Mass of as-purchased coating material, i, applied in a month, kg.
 q = Number of different materials added to the coating material.
 Chij = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.
 Mij = Mass of material, j, added to as-purchased coating material, i, in a month, kg.
 Mvret = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §§ 63.3370.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which include the following information for this emissions unit:
 - a. an identification of each day during which the average hourly VOC emissions exceeded 410.0 pounds per hour, and the average hourly VOC emissions for each such day;
 - b. an identification of any record indicating that the rolling 12-month summation of

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VOC emissions exceeded 90.0 tons year, and the actual rolling 12-month summation and/or the actual annual VOC emissions;

- c. an identification of each month during which the mass-weighted average VOC emissions from coatings exceeded 0.20 kg VOC/kg of coating solids applied, and the actual mass-weighted average VOC emissions from coatings in kg VOC per kg of coating solids applied, for each such month;
 - d. an identification of any record indicating that the VOC content of any coating used in this emissions unit exceeded 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents.
 - e. an identification of each month during which the average HAP emissions from coatings exceeded 8 percent of the mass of coating solids applied as described in the equation in Section III.3(b)(ii) of the terms and conditions of this permit, and 1.6 percent of the mass of coatings, applied as described in the equation in Section III.3.(c)(ii) of the terms and conditions of this permit, and actual percentage of the HAP emissions of the mass of coatings and the actual percentage of the HAP emissions of the mass of coating solids for each such month.
2. Within 60 days after startup of this emissions unit, the permittee shall submit to the Ohio EPA a Notification of Compliance Status, signed by the responsible official who shall certify its accuracy, attesting to whether the emissions unit has complied with the relevant standard. The notification shall list:
- a. The methods that were used to determine compliance;
 - b. The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedure or methods that were conducted;
 - c. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;
 - d. The type and quantity of Hazardous Air Pollutant(s) [HAP(s)] emitted by the emissions unit, reported in units and averaging times and in accordance with the test methods specified in 40 CFR 63 Subpart JJJJ;
 - e. An analysis demonstrating whether the affected source is a major source or an area source;

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- f. A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each HAP and the control efficiency (percent) for each control device (or method); and
 - g. A statement by the owner or operator of this affected source of whether the emissions unit has complied with the requirements of 40 CFR Part 63, Subpart JJJJ.
3. The permittee shall submit semi-annual compliance reports as required by 40 CFR Part 63, Subpart JJJJ in accordance with the requirements of 63.3400(c)(1) and (2).
 4. The permittee shall submit quarterly reports that identify the days during which any fuel other than natural gas is burned in this emissions unit. The report shall indicate the type of fuel, the extent of its use and the plan to prevent the reoccurrence.
 5. The permittee shall submit annual reports that identify the total amount of VOC emitted during the previous calendar year.

E. Testing Requirements

1. Compliance with the emissions limits in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation
 2.9 pounds of VOC per gallon of coating, as applied

 Applicable Compliance Method
 Compliance shall be determined based upon the record keeping requirements specified in section III.1 of these terms and conditions. In accordance with OAC rule 3745-21-04 (B)(5), USEPA Method 24 shall be used to determine the VOC content of the coatings. When a specific formulation is used less than 250 gallons per year, formulation data may be used for compliance. In accordance with the USEPA's written approval of February 11, 1998, Headspace Gas Chromatograph Technique modified Method 8260A may be used to determine the VOC content of the water-based coatings, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A.
 - b. Emission Limitation:
 410.0 lbs VOC/hr, including cleanup on a daily average basis; and 90.0 tons VOC per rolling 12-month period

 Applicable Compliance Method:
 Compliance shall be based on the record keeping requirements in Section III.1 of these terms and conditions.
 - c. Emission Limitation

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The permittee shall not discharge into the atmosphere emissions of more than 0.20 kg VOC/kg coating solids applied, calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method

Compliance shall be based upon the on the record keeping requirements in Section III.2. of these terms and conditions.

d. Emission Limitation

The permittee shall not discharge into the atmosphere emissions of more than 8 percent of the HAPs to coating solids applied (0.08 kg HAP/kg solids) , calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method

Compliance shall be based upon the on the record keeping requirements in Section III.3 of these terms and conditions.

e. Emission Limitation

The permittee shall not discharge into the atmosphere emissions of more than 1.6 percent of the HAPs to the mass of coating, applied (0.016 kg HAP/kg solids) , calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method

Compliance shall be based upon the on the record keeping requirements in Section III.3 of these terms and conditions.

f. Emission Limitation:

2.0 pounds per hour and 8.76 tons per year of Nitrogen Oxides (NO_x)

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor of 100 pounds NO_x per million cubic feet of natural gas (EPA AP-42, July 1998, Section 1.4, Natural Gas Combustion) by the maximum hourly natural gas combustion capacity (20,000 ft³/hr) of this emissions unit. If required by Ohio EPA, emission testing to determine compliance with the above emission limitation shall be perform, using method 1 - 4 and 7 of 40 CFR Part 60, appendix A.

Compliance with the annual limit shall be assumed providing that compliance with the hourly limit is established

g. Emission Limitation:

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1.6 pounds per hour and 7.0 tons per year of CO

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor of 84 pounds CO per million cubic feet of natural gas (EPA AP-42, July 1998, Section 1.4) by the maximum hourly natural combustion capacity (20,000 ft³/hr) of this emissions unit. If required by Ohio EPA, emission testing to determine compliance with the above emission limitation shall be performed, using method 1 - 4 and 10 of 40 CFR Part 60, appendix A.

Compliance with the annual limit shall be assumed providing that compliance with the hourly limit is established

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> |
|---|--------------------------------------|--|
| K001 - A research and development headquarters pilot coater K001 [with associated web unwind station, application coating stations, web treatment units, direct fired drying ovens (with maximum combined heat capacity of 16 MmBtu/hr) web rewind station, and storage tanks. A small natural gas boiler (<10 mmBtu/hr)] | OAC rule 3745-31-05 | None |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

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None

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V. Testing Requirements

None

VI. Miscellaneous Requirements

None