

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- RENEWAL

PERMITTEE

MII International, Inc.
Attn: E. J. Maxisch
2800 Shermer Road
Northbrook, Illinois 60062

Application No.: 74100026 I.D. No.: 031207ACG
Applicant's Designation: Date Received: December 14, 2000
Subject: Tape Coating Mfg.
Date Issued: Expiration Date:
Location: 2800 Shermer Road, Northbrook

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of one coater/laminator with oven and thermal oxidizer pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s)

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 25 tons/year for VOM, 10 tons/year for any single HAP and 25 tons/year of a totaled HAP), as further described in Attachment A. As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program permit.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) issued for this location.
- 2a. Emissions and operation of the coater/laminator with oven shall not exceed the following limits:
 - i. Water-based adhesives and solvents:

<u>Usage</u>		<u>VOM Content</u>	<u>Uncontrolled VOM and HAP Emissions</u>	
<u>(Lb/Month)</u>	<u>(Lb/Yr)</u>	<u>(Wt. %)</u>	<u>(Lb/Month)</u>	<u>(Ton/Year)</u>
5,625	56,250	8.0	450	2.25

- ii. Solvent-based adhesives and solvents:

<u>Usage</u>		<u>VOM Content</u>	<u>Controlled VOM Emissions¹</u>	
<u>(Lb/Month)</u>	<u>(Lb/Yr)</u>	<u>(Wt. %)</u>	<u>(Lb/Month)</u>	<u>(Ton/Year)</u>
225,000	2,250,000	60	4,050	20.25

¹ These limits are based on maximum values and an overall reduction in emissions of VOM which would otherwise be emitted from the above-referenced equipment of 97% (i.e., 100% capture and 97% destruction) by the thermal oxidizer.

iii. Clean-up MEK solvents:

Usage (Lb/Month)(Lb/Yr)		VOM Content (Wt. %)	Uncontrolled VOM and HAP Emissions (Lb/Month)	HAP Emissions (Ton/Year)
369	3,690	100	369	1.85

iv. Any single HAP:

Usage (Lb/Month) (Lb/Yr)		Controlled any single HAP Emissions ² (Lb/Month)	HAP Emissions (Ton/Year)
38,670	386,700	1,160	5.8

² These limits are based on maximum values and on overall reduction in the emissions of HAP which would otherwise be emitted from the above-referenced equipment of 97% (i.e., 100% capture and 97% destruction) by the thermal oxidizer.

v. Natural gas combustion:

Total Natural Gas Usage (10 ⁶ scf/Month) (10 ⁶ scf/Year)		VOM Emissions (Ton/Month) (Ton/Year)	
15.0	150	0.1	0.5

- b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.
- c. These limits define the potential emissions of VOM and HAP and are based on the actual emissions determined from maximum production capacity.
- 3. The emissions of HAPs as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish by rule which would require the Permittee to obtain a Clean Air Act Permit Program permit from the Agency. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a Clean Air Act Permit Program permit from the Agency.
- 4. The afterburner (a.k.a., thermal oxidizer) shall be in operation at all times that the roller coater is in operation and emitting, except during the application of coatings meeting the requirements of 35 Ill. Adm. Code 218.204(c), i.e., coatings with a VOM content that does not

exceed 2.3 lbs/gal (minus water and any compounds which are specifically exempted from the definition of VOM).

5. Natural gas shall be the only fuel utilized at this source.
6. The thermal oxidizer capture and control system shall be operated to achieve 100% capture and a minimum of 97% destruction of the emissions of VOM from one coater/laminator with oven.
- 7a. The afterburner (a.k.a., thermal oxidizer) shall be in operation at all times that the roller coater is in operation and applying coating exceeding the limitations of 35 Ill. Adm. Code 218.204(c).
- b. The afterburner combustion chamber shall be preheated to at least manufacturer's recommended temperature but not less than the temperature at which compliance was demonstrated in the most recent compliance test, or 1400°F in the absence of compliance test. This temperature shall be maintained during operation.
- c. The afterburner shall be equipped with a continuous monitoring device which is installed, calibrated, maintained, and operated according to vendor's specifications at all times that the afterburner is in use. This device shall monitor the afterburner combustion temperature.
- d. The Permittee shall collect and record the following information each day:
 - i. Afterburner combustion chamber monitoring data.
 - ii. A log of operating time for the capture system, afterburner, and monitoring device, and the associated emission units.
 - iii. A maintenance log for the capture system, afterburner, and monitoring device detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- 8a. The Permittee shall maintain records of the following items:
 - i. A list giving the name and identification number of each adhesive, solvent and any other material used containing VOM as applied;
 - ii. VOM content in weight percent for each adhesive, solvent and any other material used containing VOM as applied;
 - iii. Actual usage rate in lbs/month and tons/year for each adhesive, solvent and any other material used containing VOM as applied;
 - iv. A list of HAP's present and the weight percent content of each HAP for each adhesive, solvent and other material containing VOM;

- v. Emissions of VOM and single HAPs on a monthly and 12 month rolling total basis in tons/month and tons/year;
 - vi. Total natural gas usage, 10^6 scf/month and 10^6 scf/year;
 - vii. A daily log of operating time for the capture system, control device, monitoring equipment and the associated coating equipment;
 - viii. A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Agency and USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond them to an Agency request for records during a course of a source inspection.
9. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Agency's compliance Unit in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the record keeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences. The report shall be sent to:

Illinois Environmental Protection Agency
 Bureau of Air
 Compliance Section (#40)
 P.O. Box 19276
 Springfield, IL 62794-9276

10. Emissions and operation from all natural gas combustion sources shall not exceed the following limits:

Pollutant	Natural Gas Usage		Emission Rate (lb/ 10^6 scf)	Emissions	
	(10^6 scf/Month)	(10^6 scf/Yr)		(Tons/Mo)	(Tons/Yr)
NO _x	15	150	100	0.8	7.5
CO	15	150	84	0.6	6.3
PM	15	150	7.6	0.1	0.6

This table defines the potential emissions of the thermal oxidizer and oven and is based on standard emission factors given by AP-42. Compliance with annual limits shall be determined from a running total of 12 months of data.

- 11a. The Permittee shall submit the following additional information from the prior calendar year with the Annual Emissions Report, due May 1st of each year:
- i. VOM and single HAP usage (tons/year);
 - ii. Natural gas usage (10^6 scf/year).
- b. If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.
- c. All reports specifically required by federal rules (notification, tests, reports, etc.) shall be sent to:

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (#40)
P.O. Box 19276
Springfield, IL 62794-9276

and

Illinois Environmental Protection Agency
Division of Air Pollution Control - Regional Office
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this, please call Jim Kallmeyer at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JDK:psj

cc: IEPA, FOS Region 1
IEPA, Compliance Unit
USEPA

Attachment A

This attachment provides a summary of the maximum emissions from the coater/laminator with oven operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, e.g., 25 tons per year of VOM at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

1a. Emissions and operation of the coater/laminator with oven shall not exceed the following limits:

i. Water-based adhesives and solvents:

Emissions (Ton/Year)	Usage		VOM Content	Uncontrolled VOM and HAP
	<u>(Lb/Month)</u>	<u>(Lb/Yr)</u>	<u>(Wt. %)</u>	<u>(Lb/Month)</u>
2.25	5,625	56,250	8.0	450

ii. Solvent-based adhesives and solvents:

Emissions ¹ (Ton/Year)	Usage		VOM Content	Controlled VOM	
	<u>(Lb/Month)</u>	<u>(Lb/Yr)</u>	<u>(Wt. %)</u>	<u>(Lb/Month)</u>	
	225,000	2,250,000	60	4,050	20.25

¹ These limits are based on maximum values and an overall reduction in emissions of VOM which would otherwise be emitted from the above-referenced equipment of 97% (i.e., 100% capture and 97% destruction) by the thermal oxidizer.

iii. Clean-up MEK solvents:

Emissions (Ton/Year)	Usage		VOM Content	Uncontrolled VOM and HAP
	<u>(Lb/Month)</u>	<u>(Lb/Yr)</u>	<u>(Wt. %)</u>	<u>(Lb/Month)</u>
1.85	369	3,690	100	369

iv. Any single HAP:

Emissions ² <u>(Ton/Year)</u>	Usage		Controlled any single HAP	
	<u>(Lb/Month)</u>	<u>(Lb/Yr)</u>	<u>(Lb/Month)</u>	
	38,670	386,700	1,160	5.8

² These limits are based on maximum values and on overall reduction in the emissions of HAP which would otherwise be emitted from the above-referenced equipment of 97% (i.e., 100% capture and 97% destruction) by the thermal oxidizer.

v. Natural gas combustion:

Total Natural Gas Usage		VOM Emissions	
(10 ⁶ scf/Month)	(10 ⁶ scf/Year)	(Ton/Month)	(Ton/Year)
15.0	150	0.1	0.5

b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

c. These limits define the potential emissions of VOM and HAP and are based on the actual emissions determined from maximum production capacity.

2. Emissions and operation from all natural gas combustion sources shall not exceed the following limits:

Pollutant	Natural Gas Usage		Emission Rate (lb/10 ⁶ scf)	Emissions	
	(10 ⁶ scf/Month)	(10 ⁶ scf/Yr)		(Tons/Mo)	(Tons/Yr)
NO _x	15	150	100	0.8	7.5
CO	15	150	84	0.6	6.3
PM	15	150	7.6	0.1	0.6

This table defines the potential emissions of the thermal oxidizer and oven and is based on standard emission factors given by AP-42. Compliance with annual limits shall be determined from a running total of 12 months of data.

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