

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- RENEWAL

PERMITTEE

Bartlett Manufacturing Co., Inc.  
Attn: Douglas Bartlett  
225 North First Street  
Cary, Illinois 60013

Application No.: 85060012  
Applicant's Designation: IEPA-AF85B  
Subject: Circuit Board Manufacturing  
Date Issued: July 3, 2001  
Location: 225 North First Street, Cary

I.D. No.: 111010AAM  
Date Received: September 28, 2000  
Expiration Date: July 3, 2006

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of a multi-layer line, LPI line developer, Desmear Line (DL-1), of etch strip (EL-1, 2, 3, 4), oven (OV-1), preclean (PREC-1), silk screen presses, 2UV curing ovens, two LPI silk screen presses and one electric oven (OV5) 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 volatile organic materials (VOM), 25 tons/year for combined hazardous air pollutants (HAPs) and 10 tons/year for any individual HAP). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. As a consequence of this federally enforceable permit limiting emissions of VOM to below 25 tons/year, Subpart TT of Part 218 of 35 Ill. Adm. Code nor any of its control requirements will apply to the operations at this facility.
- b. This permit is issued based on negligible emissions of VOM from any source not exceeding 8 lb/hour, pursuant to 35 Ill. Adm. Code 218.301.
- 3a. Ink and clean-up solvent usage and emissions from the operation of the silk screen presses shall not exceed the following limits:

<u>Material</u>	<u>VOM Content (Wt. %)</u>	<u>Material Usage (Lb/Mo) (Lb/Yr)</u>		<u>VOM Emissions (Lb/Mo) (T/Yr)</u>	
Electro-Brite RS-8015	75.3	878*	7,023	675*	2.7
SR-1000 Ink	3.5	60*	480	18*	0.1
Enthone DSR 3241G LPI Ink	24.5	2,000*	16,000	500*	2.0
Enthone DSR 3242G LPI Ink	24.5	1,625*	13,000	400*	1.6
PC7810 Solder Mask Screen Cleaner	100.0	750*	6,000	750*	3.0
SC1 Screen Cleaner	100.0	750*	6,000	750*	3.0
M5003	30.0		120		0.02
E200AB	29.0		400		0.06
BLKLEG	26.0		450		0.06
				Total	12.5

\* Because of seasonal production variation, 12 x monthly rates exceed annual rates.

These limits define the potential VOM emissions of the printing and clean-up operations of the silk screen presses and are based on actual emissions determined by maximum operation and material balance. Compliance with annual limits shall be determined from a running total of the current month and the preceding 11 months of data.

- b. VOM emissions and operation of the following equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hr/Yr)</u>	<u>Emission Factor (Lb/Hr)</u>	<u>Volatile Organic Matter Emissions (Lb/Mo)</u>	<u>(T/Yr)</u>
Etch Strip Lines (EL-1, -2)	7200	0.45	405*	1.6
Etch Strip Lines (EL-3, -4)	3600	1.33	599*	2.4
Oven (OV-1)	6552	1.58	1,322*	5.2
				9.2

\* Because of seasonal production variation, 12 x monthly rates exceed annual rates.

These limits define the potential VOM emissions of the above operations and are based on actual emissions determined by maximum operation and material balance. Compliance with annual limits shall be determined from a running total of the current month and the preceding 11 months of data.

- c. Usage and emissions of VOM from the use of isopropyl alcohol and film kleen shall not exceed 229 lb/month and 0.9 tons/year.
- d. Emissions and operation of the Desmear Line (DL-1) shall not exceed the following:

<u>Liquid Raw Materials (Tons/Year)</u>	<u>VOM Usage and Emissions (Tons/Year)</u>
5.00	1.8

These limits define the potential VOM and HAP emissions of the above operations and are based on actual emissions determined by maximum operation and material balance. Compliance with annual limits shall be determined from a running total of the current month and the preceding 11 months of data.

4. The emissions of Hazardous Air Pollutants (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 in rule which would require the Permittee to obtain a CAAPP 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 CAAPP permit from the Agency.

- 5a. Combined natural gas consumption for the natural gas-fired combustion equipment shall not exceed:

<u>Fuel</u>	<u>(mmcf/Month)</u>	<u>(mmcf/Year)</u>	<u>NO<sub>x</sub> Emissions</u>	
			<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
Natural Gas	2.0	8.0	1.0	4.0

- b. This permit is issued based on the use of natural gas for all combustion equipment. Use of any other fuel will require a revised permit.
  - c. Emissions from these units shall be calculated by using AP-42 emission factors and natural gas usage as indicated in Attachment A.
6. Emissions and operation of the following equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating</u>	<u>Particulate</u>	
	<u>Hours</u>	<u>Matter Emissions</u>	
	<u>(Hr/Yr)</u>	<u>(Lb/Hr)</u>	<u>(Ton/Yr)</u>
Preclean Line (PREC-1)	7200	0.36	1.3

These limits define the potential emissions of the above equipment and are based on emission factors given in the application and the maximum hours of operation.

7. This permit is based on negligible emissions of particulate matter from each etch line, etch strip, each oven, each silk screen press developer. For this purpose, emission of each source shall not exceed 0.1 lb/hour and 0.44 tons/year.
8. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

9. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.
10. The Permittee shall maintain records of the following items:
  - a. Name and identification number of all VOM-containing chemicals including: inks, clean-up solvents, etc.
  - b. Quantity and density (lb/gal) VOM-containing material used (gal/month and gal/year).
  - c. VOM content of all VOM-containing materials (inks, clean-up, etc.)(lb/gal or weight, %).
  - d. VOM and HAP emissions (lb/month and ton/year).
  - e. Desmear line solution usage (gallon/month and gallon/year) with VOM and HAP content.
  - f. Natural gas usage (mmft<sup>3</sup>/month and mmft<sup>3</sup>/year).
  - g. Appropriate MSDSs for all VOM-containing materials.
11. 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 to an Agency request for records during the course of a source inspection.
12. 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 recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
13. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

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

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

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

14. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year: Usage of each material and VOM and HAP contents; VOM and HAP emission calculations. If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.

Please note that the Desmeare Line (DL-1) has been incorporated into this permit.

Please note also that the 5 mechanical chemical cleaners and all soldering is exempt from state permitting requirements pursuant to 35 Ill. Adm. Code 201.146(o) and (y), respectively.

Please note also that certain emission units have been added or removed and limits have been corrected.

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

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

DES:RBS:jar

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

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the circuit board manufacturing facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Agency 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., 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. Ink and clean-up solvent usage and emissions from the operation of the silk screen presses shall not exceed the following limits:

These limits define the potential VOM and HAP emissions of the above operations and are based on actual emissions determined by maximum operation and material balance. Compliance with annual limits shall be determined from a running total of the current month and the preceding 11 months of data.

<u>Material</u>	<u>VOM Content (Wt. %)</u>	<u>Material Usage (Lb/Mo)(Lb/Yr)</u>	<u>VOM Emissions (Lb/Mo)(T/Yr)</u>
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			<u>Total 12.5</u>

\* Because of seasonal production variation, 12 x monthly rates exceed annual rates.

- b. VOM emissions and operation of the following equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hr/Yr)</u>	<u>Emission Factor (Lb/Hr)</u>	<u>Volatile Organic Matter Emissions (Lb/Mo)</u>	<u>(T/Yr)</u>
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<u>Liquid Raw Materials</u> (Tons/Year)	<u>VOM Usage and Emissions</u> (Tons/Year)
5.00	1.8

- 2. The emissions of Hazardous Air Pollutants (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 in rule which would require the Permittee to obtain a CAAPP 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 CAAPP permit from the Agency.
- 3. Emissions and operation of the following equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours</u> (Hr/Yr)	<u>Particulate Matter Emissions</u> (Lb/Hr)      (Ton/Yr)	
Preclean Line (PREC-1)	7200	0.36	1.3

- 4. Combined natural gas consumption and NO<sub>x</sub> emissions for the natural gas-fired combustion equipment shall not exceed:

<u>Fuel</u>	<u>Usage</u> (mmcf/Month)      (mmcf/Year)		<u>NO<sub>x</sub> Emissions</u> (Ton/Mo)      (Ton/Yr)	
Natural Gas	2.0	8.0	1.0	4.0

- 5. This permit is issued based on negligible emissions of particulate matter from each etch line, etch strip, each oven, each silk screen press and developer. For this purpose, emissions of each source shall not exceed 0.1 lb/hour and 0.44 tons/year.

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