

10 June 2005

Mr. Robert S. Leach
The Slater Companies
750 School Street
Pawtucket, RI 02908

Dear Mr. Leach:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your application for the installation of process equipment and air pollution control equipment at your Slater Dye Works facility, located at 727 School Street, Pawtucket.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval Nos. 1855-1856).

If there are any questions concerning this permit, please contact me at 222-2808, extension 7011.

Sincerely,

Douglas L. McVay
Associate Supervising Engineer
Office of Air Resources

cc: Pawtucket Building Official
Bronwyn Boyle - Slater

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

MINOR SOURCE PERMIT

SLATER DYE WORKS, INC. & SLATER SCREEN PRINT CORPORATION

APPROVAL NOs. 1855-1856

Pursuant to the provisions of Air Pollution Control Regulation No. 9, this minor source permit is issued to:

SlaterDye Works, Inc. & Slater Screen Print Corporation

For the following:

Installation of a 130" Babcock Tenter frame (Approval No. 1855) and an Alden Air Systems

Aero-Flame Thermal Oxidizer (Approval No.1856).

Located at: *727 School Street, Pawtucket*

This permit shall be effective from the date of its issuance and shall remain in effect until revoked by or surrendered to the Department. This permit does not relieve *Slater Dye Works, Inc. & Slater Screen Print Corporation* from compliance with applicable state and federal air pollution control rules and regulations. The design, construction and operation of this equipment shall be subject to the attached permit conditions and emission limitations.

**Stephen Majkut, Chief
Office of Air Resources**

Date of Issuance

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES**

Permit Conditions and Emission Limitations

Slater Dye Works, Inc. & Slater Screen Print Corporation

Approval Nos. 1855-1856

A. Emission Limitations

1. Volatile Organic Compounds (VOC)

- a. The daily-weighted average VOC content of all coatings used on Tenter Frame No. 4 shall not exceed 2.9 lbs. of VOC per gallon of coating (minus water and exempt compounds).
- b. The total quantity of VOC emissions discharged to the atmosphere from the entire facility shall not exceed 8,167 pounds of VOC per month based upon a 12-month rolling average.

2. Hazardous Air Pollutant (HAP)

The total quantity of HAP emissions discharged to the atmosphere from the entire facility shall not exceed 1500 pounds of any one (1) HAP or 4,000 pounds of any combination of HAPs per month based upon a 12-month rolling average.

3. Visible Emissions

There shall be no visible emissions from the Aero-Flame thermal oxidizer exhaust stack. Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this requirement.

B. Operating Requirements

1. The Aero-Flame thermal oxidizer shall be operated at a minimum temperature of 550 °F whenever emissions from Tenter Frame No. 4 are discharged to the unit.
2. The temperature rise across the Aero-Flame thermal oxidizer shall be a minimum of 250 °F.

3. There shall be no bypassing of the Aero-Flame thermal oxidizer during times when emissions from Tenter Frame No. 4 are being discharged to the device.
4. Tenter Frame No. 4 shall be equipped with an interlock to prevent operation of the equipment if the operating temperature of the Aero-Flame thermal oxidizer is less than the temperature specified in Condition B.1.

C. Continuous Monitor

1. Inlet and outlet temperatures to the Aero-Flame thermal oxidizer shall be monitored continuously.

D. Compliance Demonstration and Testing

1. The daily-weighted average VOC content, in units of pounds of VOC per gallon of coating, minus water and exempt compounds, as applied, of all coatings used each day on Tenter Frame No. 4 shall be calculated using the following equation:

$$VOC_w = \frac{\sum_{i=1}^n V_i C_i}{V_T}$$

Where:

- VOC_w = The daily-weighted average VOC content of the coatings, as applied, used on Tenter Frame No. 4, in units of pounds of VOC per gallon of coating, excluding water and exempt compounds;
- n = The number of different coatings, as applied, each day on Tenter Frame No. 4;
- V_i = The volume of each coating, as applied, each day on Tenter Frame No. 4, in units of gallons, excluding water and exempt compounds; and
- C_i = The VOC content of each coating, as applied, each day on Tenter Frame No. 4, in units of pounds VOC per gallon of coating, excluding water and exempt compounds; and

$V_T =$ The total volume of all coatings, as applied, each day on Tenter Frame No. 4, in units of gallons, excluding water and exempt compounds.

2. VOC Content of Coatings As-Supplied

- (a) For each coating that is not formulated on-site by thinning or mixing with another material (“as-supplied”), the VOC content of the coating shall be determined by documentation furnished by the coating supplier or an outside laboratory that provides the VOC content, water content, exempt compounds content, solids content and density of each coating used.
- (b) VOC, water, exempt compounds and solids content, by weight, of as-supplied coatings shall be determined with EPA Method 24 or an alternative procedure approved by EPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A”, EPA-340/1-91-010.
- (c) If the owner/operator uses a coating that does not release VOC reaction by products during the cure; for example, if all VOC is solvent; the owner/operator may request permission to use batch formulation information to determine VOC content. If the VOC content of a coating determined by an EPA Method 24 test is greater than that indicated by the formulation data, the EPA Method 24 test shall govern.

3. VOC Content of Coatings Formulated On-site

- (a) For each coating that is formulated on-site by thinning or mixing with another material, the VOC content of the coating shall be determined by:
 - (1) Maintaining batch formulation information documenting the VOC content of each coating; or,
 - (2) Using EPA Method 24 or an alternative procedure approved by EPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A,” EPA-340/1-91-010.

- (b) If the VOC content of a coating determined by an EPA Method 24 test is greater than that indicated by the facility's formulation data, the EPA Method 24 test shall govern.

E. Record Keeping and Reporting

1. The owner/operator shall collect and record all of the following information each day as applied for Tenter Frame No. 4:
 - (a) The name, type, identification number and amount of each material containing VOC and/or HAP used on Tenter Frame No. 4, and;
 - (b) The mass of VOC per volume of each coating (excluding water and exempt compounds) and the volume of each coating (excluding water and exempt compounds), as applied, used each day on Tenter Frame No. 4, and;
 - (c) The daily-weighted average VOC content of all coatings, in lb VOC per gallon of coating (minus water), as applied on Tenter Frame No. 4, calculated according to the procedure in Condition D.1, and;
 - (d) The type and amount of VOC used for diluents and cleanup operations each day on Tenter Frame No. 4.
2. The inlet and outlet temperature of the Aero-Flame thermal oxidizer shall be checked a minimum of once per shift and the date, time and temperature shall be recorded.
3. The owner/operator shall, on a monthly basis, no later than 5 days after the first of the month, determine the total quantity of VOC discharged to the atmosphere from the entire facility. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
4. The owner/operator shall notify the Office of Air Resources in writing within 15 days, whenever the total quantity of volatile organic compound emissions discharged to the atmosphere from the entire facility exceeds 8,167 pounds of VOC per month based upon a 12-month rolling average.
5. The owner/operator shall, on a monthly basis, no later than 5 days after the first of the month, determine the total quantity of HAP discharged to the atmosphere from the entire facility. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

6. The owner/operator shall notify the Office of Air Resources in writing, within 15 days, whenever the total quantity of HAP emissions discharged to the atmosphere from the entire facility exceeds 1500 pounds of any one (1) HAP or 4,000 pounds of any combination of HAPs per month based upon a 12-month rolling average.
7. The owner/operator shall, at least 30 calendar days before changing the method of compliance from daily-weighted averaging to the use of complying coatings or control devices, comply with all requirements of APC Regulation No. 19, Subsection 19.5.3 or 19.5.4, respectively. Upon changing the method of compliance from the use of daily-weighted averaging to complying coatings or control devices, the owner/operator shall comply with all the requirements of APC Regulation 19 applicable to that compliance method.
8. The owner/operator shall notify the Office of Air Resources, in writing, of the date of actual initial start-up of Tenter Frame No. 4 and the thermal oxidizer no later than fifteen days after such date.
9. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance with the terms of this permit or any other applicable air pollution control rules and regulations.
10. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit or any other air pollution control rule or regulation within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information
 - a. The name and location of the facility;
 - b. The subject source(s) that caused the noncompliance with the permit term;
 - c. The time and date of first observation of the incident of noncompliance;
 - d. The cause and expected duration of the incident of noncompliance;
 - e. The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate;
 - f. The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance.

11. The owner/operator shall notify the Office of Air Resources in writing of any planned physical or operational change to any equipment that would:
 - a. Change the representation of the facility in the application.
 - b. Alter the applicability of any state or federal air pollution rules or regulations.
 - c. Result in the violation of any terms or conditions of this permit.
 - d. Qualify as a modification under APC Regulation No. 9.

Such notification shall include:

- Information describing the nature of the change.
 - Information describing the effect of the change on the emission of any air contaminant.
 - The scheduled completion date of the planned change.
12. All records required in this permit shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Office of Air Resources upon request.

F. Malfunctions

1. Malfunction means a sudden and unavoidable breakdown of process or control equipment. In the case of a malfunction of any air pollution control system, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of an air pollution control system is expected or may reasonably be expected to continue for longer than 24 hours and if the owner or operator wishes to operate the source on which it is installed at any time beyond that period, the Director shall be petitioned for a variance under Section 23-23-15 of the General Laws of Rhode Island, as amended. Such petition shall include, but is not limited to, the following:
 - a. Identification of the specific air pollution control system and source on which it is installed;
 - b. The expected period of time that the air pollution control system will be malfunctioning or out of service;

- c. The nature and quantity of air contaminants likely to be emitted during said period;
 - d. Measures that will be taken to minimize the length of said period;
 - e. The reasons that it would be impossible or impractical to cease the source operation during said period.
2. The owner/operator may seek to establish that a malfunction of any air pollution control system that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the owner/operator must demonstrate to the Office of Air Resources that:
- a. The malfunction was not attributable to improperly designed air pollution control equipment, lack of preventative maintenance, careless or improper operation, or operator error;
 - b. The malfunction was not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
 - c. Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable.
 - d. All possible steps were taken to minimize emissions during the period of time that the repairs were performed.
 - e. Emissions during the period of time that the repairs were performed will not:
 - (1) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and
 - (2) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard.
 - f. The reasons that it would be impossible or impractical to cease the source operation during said period.
 - g. The owner/operator's action in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources, in writing, within two working days of the time when the malfunction occurred and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken.

The owner/operator shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction.

G. Other Permit Conditions

1. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all reasonable times for the purpose of inspecting any air pollution source, investigating any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.
2. To the extent consistent with the requirements of this permit and applicable federal and state laws, the facility shall be designed, constructed and operated in accordance with the representation of the facility in the permit application.
3. The owner/operator shall shut down Tenter Frame No. 4 in the event of a malfunction of the Aero-Flame thermal oxidizer that results in or that could result in, emissions in excess of the permit limits. The equipment shall remain shutdown until the malfunction has been identified and corrected.
4. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
5. Within 90 days of the date of issuance of this permit, the owner/operator shall certify to the Office of Air Resources that the facility is in compliance with the requirements of Air Pollution Control Regulation No. 19. This certification shall include:
 - a. The name and identification number of each coating line or operation subject to Air Pollution Control Regulation No. 19;

- b. The name and identification number of each coating, as applied, on each coating line or operation;
- c. The mass of VOC per volume of coating (excluding water), the volume of each coating (excluding water), the density of each coating, and the volume fraction solids content of each coating, as applied, on each coating line or operation;
- d. If complying by the use of daily-weighted averaging:
 - (1) the calculation of the daily-weighted average for each day of the previous month using the procedure outlined in Appendix A of Air Pollution Control Regulation No. 19, and;
 - (2) The instrument or method by which the owner/operator will accurately measure or calculate the volume of each coating (excluding water), as applied, used each day on each coating line or operation.
 - (3) The method by which the owner/operator will create and maintain records each day as required by Air Pollution Control Regulation No. 19.

The completed certification shall be submitted to:

Ted Burns
Supervising Air Quality Specialist
Office of Air Resources
235 Promenade Street
Providence, RI 02908

- 6. Within 90 days of the date of issuance of this permit, the owner/operator shall submit to the Office of Air Resources a registration that meets the requirements of Air Pollution Control Regulation No. 22. This registration shall include the following information:
 - a. The name and address of the facility;
 - b. The name and telephone number of the owner or operator of the facility and of a technical contact person for the facility; and
 - c. For each of the listed toxic air contaminants emitted by the facility in an amount greater than the Minimum Quantity specified in Table III for that substance during the previous calendar year:

- (1) The name of the substance;
- (2) The process that emitted the substance;
- (3) The amount of the substance used at the facility during the previous calendar year,
- (4) The amount of the substance emitted by the facility during the previous calendar year, and
- (5) The method used to calculate emissions from the facility.

The completed registration shall be submitted to:

Barbara Morin
Supervising Air Quality Specialist
Office of Air Resources
235 Promenade Street
Providence, RI 02908