

12 February 2007

Mr. John M. Wilbur  
Admiral Packaging, Inc.  
10 Admiral Street  
Providence, RI 02908

Dear Mr. Wilbur:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your application for the installation of air pollution control equipment at your 10 Admiral Street, Providence facility.

The air pollution control equipment shall consist of a regenerative thermal oxidizer (Approval No. 1958) which will control emissions from the Windmoeller & Hoelscher 6-Color Press No. 1 (Approval No. 622), the Windmoeller & Hoelscher 8-Color Starflex Press (Approval No. 1186) and the Windmoeller & Hoelscher 8-Color Soloflex Press (Approval No. 1433). The regenerative thermal oxidizer will replace two existing catalytic oxidizers (Approval Nos. 1187 & 1364).

Enclosed is a minor source permit issued pursuant to our review of your application.

The permit conditions and emission limitations in this permit incorporate and include those in Approval Nos. 622, 1186 and 1433. Hereinafter the design, construction and operation of all of the equipment addressed in these approvals shall be subject to the permit conditions and emission limitations contained in this minor source permit.

Should you have any questions concerning this permit, I can be reached at 222-2808, extension 7011.

Sincerely,

Douglas L. McVay  
Associate Supervising Engineer  
Office of Air Resources

cc: Providence Building Official  
Stacey L. McFadden, P.E. – LFR

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

MINOR SOURCE PERMIT

*ADMIRAL PACKAGING, INC.*

APPROVAL NOs. 622, 1186, 1433 and 1958

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

*Admiral Packaging, Inc.*

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**For the following:**

*Installation of a CMM 15,000 scfm regenerative thermal oxidizer system (Approval No. 1958)*

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*to treat VOC emissions generated from the Windmoeller & Hoelscher 6-Color Press No. 1*

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*(Approval No. 622), the Windmoeller & Hoelscher 8-Color Starflex Press (Approval No. 1186),*

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*the Windmoeller & Hoelscher 8-Color Soloflex Press (Approval No. 1433) and the ink and still*

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*rooms prior to discharge to the atmosphere.*

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**Located At:** *10 Admiral Street, Providence*

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**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 *Admiral Packaging, Inc.* 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.**

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

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**Date of issuance**

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

Permit Conditions and Emission Limitations

**ADMIRAL PACKAGING, INC.**

Approval Nos. 622, 1186, 1433 and 1958

A. Emission Limitations

1. The press room shall be equipped with an emission capture system that captures 100% of the VOC generated from the operation of the Windmoeller & Hoelscher 6-Color Press No. 1, the Windmoeller & Hoelscher 8-Color Starflex Press, the Windmoeller & Hoelscher 8-Color Soloflex Press and the Greco degreaser for discharge through a regenerative thermal oxidizer.
2. The ink rooms shall be equipped with an emission capture system that captures 100% of the VOC generated in the ink rooms for discharge through a regenerative thermal oxidizer.
3. The still room shall be equipped with an emission capture system that captures 100% of the VOC generated in the still room for discharge through a regenerative thermal oxidizer.
4. Destruction Efficiency
  - a. The destruction efficiency of the regenerative thermal oxidizer for VOC shall be at least 98%; or,
  - b. If the inlet concentration to the regenerative thermal oxidizer is less than 1,000 ppm (as propane), VOC emissions shall not exceed 20 ppm (as propane).
5. The total quantity of VOC discharged to the regenerative thermal oxidizer shall not exceed 365 lbs per hour, the maximum loading capacity of the oxidizer.

B. Operating Requirements

1. The operating temperature of the regenerative thermal oxidizer shall be maintained at or above 1500°F whenever VOC is being discharged to the oxidizer. This minimum temperature may be revised based on the results of emission testing.

2. The operating temperature of the RTO shall never exceed 1800°F.
3. The Windmoeller & Hoelscher 6-Color Press No. 1, the Windmoeller & Hoelscher 8-Color Starflex Press and the Windmoeller & Hoelscher 8-Color Soloflex Press shall each be equipped with an interlock to prevent operation of the presses if the operating temperature of the regenerative thermal oxidizer is less than the temperature specified in Condition B.1.
4. Compliance with Conditions A.1-3 shall be achieved by maintaining three separate Permanent Total Enclosures (PTE) for the press room, ink rooms and still room that meet the requirements of 40 CFR 51, Appendix M, Method 204 – “Criteria For and Verification of a Permanent or Temporary Total Enclosure”.
5. All access doors and windows in each PTE shall be closed during routine operation of the VOC emitting equipment contained within the PTE. Brief, occasional openings of doors to allow for access and inspection are acceptable.
6. Air passing through any opening in each PTE shall flow into the enclosure continuously.
7. All cleaning of each flexographic printing press with VOC containing material shall be conducted within the PTE. VOC emissions captured during cleaning shall be discharged to the regenerative thermal oxidizer for destruction.
8. The total volume of air discharged to the regenerative thermal oxidizer from the three PTEs shall not exceed 15,000 scfm, the design capacity of the thermal oxidizer.

C. Continuous Monitoring

1. The regenerative thermal oxidizer operating temperature shall be continuously monitored and recorded.
2. The static pressure within each PTE shall be continuously monitored and recorded.

D. Stack Testing

1. Within 180 days of the startup of the regenerative thermal oxidizer, performance testing shall be conducted to demonstrate compliance with all applicable emission limitations.
2. A stack testing protocol shall be submitted to the Office of Air Resources for review and approval at least 60 days prior to the performance of any stack tests. The owner/operator shall provide the Office of Air Resources at least 60 days prior notice of any stack test.

3. All test procedures used for stack testing shall be approved by the Office of Air Resources prior to the performance of any stack tests.
4. The owner/operator shall install any and all test ports or platforms necessary to conduct the required stack testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment.
5. All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emissions limitations.
6. A final report of the results of stack testing shall be submitted to the Office of Air Resources no later than 60 days following completion of testing.
7. All stack testing must be observed by the Office of Resources or its authorized representatives to be considered acceptable.
8. The control efficiency of the regenerative thermal oxidizer specified in Condition A.4 of this permit shall be determined using USEPA-approved test methods.

E. Record Keeping and Reporting

1. The owner/operator shall maintain the following information at the facility at all times. This information shall be kept current and be made available to the Office of Air Resources and the USEPA upon request.
  - a. Printing press number,
  - b. Hours of operation per day or per year,
  - c. Method of application,
  - d. Number and types of inks applied to the substrate,
  - e. Drying method,
  - f. Substrate type.
2. For each ink, the permittee shall maintain the following records:
  - a. Supplier name, ink name and identification number,
  - b. Ink density (lb/gal),
  - c. Total volatile content of ink as supplied (vol %),

- d. Water content of ink as supplied (wt %),
- e. Exempt solvent content of ink as supplied (wt %),
- f. Solids content of ink as supplied (wt %),
- g. Name of diluent, if any,
- h. Diluent solvent density (lb/gal),
- i. VOC content of diluent (wt %),
- j. Exempt solvent content of diluent (wt %),
- k. Diluent/ink ratio (gal diluent/gal ink).

The owner/operator shall maintain records from Conditions E.2.g-k above for any diluent and solvents used for cleanup operations.

- 3. The owner/operator shall keep records on site for each flexographic printing press on a daily basis:
  - a. Printing press number,
  - b. Time period,
  - c. Ink identification number,
  - d. Amount of ink used (gallons),
  - e. Diluent identification number,
  - f. Amount of diluent used (gallons).

The owner/operator shall also maintain records from Conditions E.3.e-f above for cleanup operations.

- 4. The owner/operator shall maintain the following information for the thermal oxidizer at all times. This information shall be kept current and be made available to the Office of Air Resources and USEPA upon request.
  - a. Identification number and model number,
  - b. Manufacturer,

- c. Installation date,
  - d. Printing press(es) controlled,
  - e. Whether or not the thermal oxidizer is always in operation when any flexographic printing press is in operation,
  - f. Type of control device,
  - g. Destruction or removal efficiency,
  - h. Date tested (If not tested, method of determining destruction efficiency),
  - i. Design combustion temperature (°F),
  - j. Emission test results-inlet VOC concentration (ppm), outlet VOC concentration (ppm), method of concentration determination, and date of determination,
  - k. Type and location of capture system,
  - l. Capture efficiency (%),
  - m. Method of determining capture efficiency.
5. The owner/operator shall record the static pressure within each PTE once per day and the date, time and measurement shall be recorded unless the process is shut down.
6. The owner/operator must notify the Office of Air Resources no later than 24 hours after an exceedance of any emission limitation is discovered. Notification shall include:
- a. Identification of the emission limitation exceeded
  - b. Suspected reason for the exceedance
  - c. Corrective action taken or to be taken
  - d. Anticipated length of the exceedance
7. Deviations from permit conditions other than emission limitations, including those attributable to upset conditions as defined in this permit, shall be reported, in writing, within five (5) business days of the deviation, to the Office of Air Resources. Reports shall describe the probable cause of such deviations, and any corrective

actions or preventive measures taken.

8. The owner/operator shall notify the Office of Air Resources in writing of the date of actual start-up of the thermal oxidizer, no later than 30 days after such date.
9. The owner/operator shall maintain a record of all measurements, performance evaluations, calibration checks and maintenance or adjustments for the continuous temperature monitor.
10. 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.
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 permit 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 the 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.

Any change that may result in an increased emission rate of any air contaminant shall have the prior approval of the Director.

12. All records required in this permit shall be maintained for a minimum of 5 years after the date of each record and shall be available to representatives of the Office of Air Resources upon request.

#### F. Other Permit Conditions

1. 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.

2. The owner/operator shall shut down the flexographic printing presses in the event of a malfunction of the emission capture system and/or thermal oxidizer that results in or that could result in, emissions in excess of the permit limits. The units shall remain shut down until the malfunction has been identified and corrected.
3. There shall be no by passing of the regenerative thermal oxidizer during times when VOC is being discharged to the device.
4. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all 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.
5. 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.
6. Approval No. 1364 issued on 4 March 1996 for the installation of a DEC-E-TECH Eagle CO-15,000-LT-HE/69.2 catalytic incinerator shall be rescinded effective with the start-up of the CMM 15,000 scfm regenerative thermal oxidizer system.

G. 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.

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