4 February 2004

Mr. Alan C. Kirchoff
Environmental Health & Safety Mgr.
ARKWRIGHT INC.
538 Main Street
Fiskville, RI 02823-0139

Dear Mr. Kirchoff:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your request for the installation of air pollution control equipment at your 538 Main Street, Fiskeville, Rhode Island facility.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval No. 1786).

The permit conditions and emission limitations in this permit incorporate and include those in Approval No. 210(a) issued on 20 July 1981 and Approval No. 661 issued on 5 June 1984. 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.

I can be reached at 222-2808, extension 7011 if there are any questions.

Sincerely,

Douglas L. McVay
Associate Supervising Engineer
Office of Air Resources

cc: Fiskeville Building Official

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

# MINOR SOURCE PERMIT

*ARKWRIGHT, INC.*

**APPROVAL NO. 210(a), 661 & 1786**

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

**Arkwright, Incorporated**

**For the following:**

*Installation of an Anguil regenerative thermal oxidizer, Model 250 (Approval No. 1786) which will treat VOC and HAP emissions generated from coating line No. 3 (Approval No. 661) and coating line No. 7(Approval No 210(a)) prior to discharge to the atmosphere.*

**Located at:** *538 Main Street, Fiskeville*

**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** *Arkwright Incorporated* **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

**ARKWRIGHT, INCORPORATED**

Approval No. 210(a), 661 & 1786

A. Emission Limitations (#3 and #7 coating lines)

1. VOC emissions generated from coating lines #3 and #7 shall be captured and contained for discharge to the thermal oxidizer.

2. VOC emissions generated from the coating lines #3 and #7 shall be reduced by 98 percent or greater. This is to be achieved through a combination of 100 percent capture of the VOC generated by the coating lines #3 and #7 and a 98 percent destruction of this VOC.

3. The destruction efficiency of the thermal oxidizer for VOC shall be at least 98 percent.

4. The total quantity of VOC discharged to the thermal oxidizer shall not exceed 350 lbs per hour the maximum loading capacity of the thermal oxidizer.

5. The total quantity of VOC emissions discharged to the atmosphere from operation of coating lines #3 and #7 shall not exceed 7.0 lbs per hour.

B. Operating Requirements

1. The operating temperature of the thermal oxidizer shall be maintained at or above 1400°F whenever VOC is being discharged to the thermal oxidizer, or at a lower temperature that has been demonstrated in the most recent compliance test to achieve the required destruction efficiency.

2. The coating lines #3 and #7 coating equipment shall each be equipped with an interlock to prevent operation of the coating equipment if the operating temperature of the thermal oxidizer is less than the temperature specified in Condition B.1.

3. To ensure 100 percent capture of the VOC generated, coating lines #3 and #7 must be located within a total enclosure. This total enclosure must meet critieria

for a permanent total enclosure in 40 CFR 51, Appendix M, Method 204 – "Criteria For and Verification of a Permananent or Temporary Total Enclosure".

4. All access doors and windows in the total enclosures for coating lines #3 and #7 shall be closed during routine operation of the coating equipment. Brief, occasional openings of doors to allow for access and inspection are acceptable.

5. Air passing through any natural draft opening in the total enclosures for coating lines #3 and #7 shall flow into the enclosures continuously.

6. All cleaning of the coating lines #3 and #7 coating equipment with VOC-containing material shall be conducted with the air pollution control system operating. VOC emissions generating during cleaning shall be captured and contained and discharged through the thermal oxidizer for destruction.

C. Continuous Monitoring

1. The thermal oxidizer operating temperature shall be continuously monitored and recorded.

D. Stack Testing

1. Within 180 days of the startup of the oxidizer, performance testing shall be conducted to demonstrate compliance with the requirements Condition A.2. Performance testing shall include a demonstration that the total enclosures for coating lines #3 and #7 meet the critieria for a permanent total enclosure in 40 CFR 51, Appendix M, Method 204 and stack testing to demonstrate that the thermal oxidizer destruction efficiency is at least 98%.

2. A stack testing protocol shall be submitted to the Office of Air Resources for review and approval 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 emission 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 Air Resources or its authorized representatives to be considered acceptable.

E. Record Keeping and Reporting

1. The owner/operator shall collect, record and maintain the following information each month for each coating line and the air pollution control device:

   a. The name, identification number and amount of each coating used for coating lines #3 and #7;

   b. The mass of VOC per unit volume of coating solids, as applied, the volume solids content, as applied, and the volume, as applied, of each coating used;

   c. The type and amount of solvent used for diluents and clean up operations;

   d. A log of operating time for the thermal oxidizer, monitoring equipment, and coating lines #3 and #7;

   e. A maintenance log for the thermal oxidizer, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages;

   f. All 3-hour periods of operation in which the average combustion temperature was more than $50^{o}$F below the average combustion temperature during the most recent performance test that demonstrated that the facility was in compliance, and;

   g. The operating temperature of the thermal oxidizer.

2. The owner/operator must notify the Office of Air Resources no later than 24 hours after an exceedance of any emission limitations 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.

3. The owner/operator shall notify the Office of Air Resources of any record showing noncompliance with the terms of this permit or any other air pollution control rule or regulation applicable to the coating lines #3 and #7 by sending a

copy of the record to the Office of Air Resources within 30 days following the occurrence.

4. 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.

5. The owner/operator shall notify the Office of Air Resources in writing of the date of actual start-up of the Anguil, Model 250 regenerative thermal oxidizer, no later than 30 days after such date.

6. The owner/operator shall notify the Office of Air Resources in writing, of any planned physical or operational change any equipment covered under this approval 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.

   Any such change shall be consistent with the appropriate regulation and have the prior approval of the Director.

7. 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. Other Permit Conditions

1. To the extent consistent with the requirements of this permit and applicable federal and state laws, the equipment shall be designed, constructed and operated in accordance with the representation of the equipment in the permit application as prepared by Arkwright Inc. dated 21 September 2003, as amended.

2. The owner/operator shall shut down coating lines #3 and #7 equipment in the event of a malfunction of the emission capture systems and/or thermal oxidizer that results in or that could result in, emissions in excess of the permit limits. The coating equipment shall remain shutdown until the malfunction has been identified and corrected.

3. There shall be no bypassing of the thermal oxidizer during times when VOC is being discharged to the control device.

4. Approval No. 662 issued for the installation of a thermal afterburner for coating line #3 is revoked. This revocation will become effective with the startup of the Anguil Regenerative Thermal Oxidizer (Approval No. 1786).

5. Approval No. 815 issued for the installation of a catalytic oxidizer for coating line #7 is revoked. This revocation will become effective with the startup of the Anguil Regenerative Thermal Oxidizer (Approval No. 1786).

6. 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.

7. 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

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.