17 June 2010

Ms. Joanne Bagley, President
Kenyon Industries, Inc.
36 Sherman Avenue
Kenyon, RI 02836

Dear Ms. Bagley:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your request for a minor source permit for process and air pollution control equipment at your 36 Sherman Avenue, Kenyon facility.

Enclosed are permit conditions and emission limitations for the minor source permit (Approval No. 2104).

Should you have any questions concerning this permit, I can be reached at (401) 222-2808, extension 7020.

Sincerely,

Pamela E. Crump, EIT
Air Quality Specialist
Office of Air Resources

cc: South Kingstown Building Official

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

MINOR SOURCE PERMIT

KENYON INDUSTRIES, INC.

APPROVAL NO. 2104

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

Kenyon Industries, Inc.

For the following:

Installation of a Calgon Model HFVS 2000 carbon adsorption system to control VOC emissions from a new Mathis KTF Custom research and development (R&D) fabric coating line.

Located At: *36 Sherman Avenue, Kenyon*

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 *Kenyon Industries, 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.**

Douglas L. McVay, Acting 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

KENYON INDUSTRIES, INC.

Approval No. 2104

A. Emission Limitations: Requirements A.1-A.4 are applicable when the method of compliance with Air Pollution Control Regulation No. 19 is the use of control devices.

1. VOC emissions from the R&D fabric coating line shall not exceed 4.79 lbs of VOC per gallon of solids.

2. Compliance with the emission limitation in condition A.1 of this permit shall be achieved through the use of an air pollution control device. VOC emissions generated from the R&D fabric coating line shall be captured and contained for discharge to an air pollution control device for VOC.

3. VOC emissions generated from the R&D fabric coating line 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 line and a 98 percent removal of this VOC.

4. The removal efficiency of the carbon adsorber for VOC shall be at least 98 percent.

5. The total quantity of emissions discharged to the atmosphere for any listed toxic air contaminant from the R&D fabric coating line shall not exceed the minimum quantity for that contaminant, as specified in Appendix A of Air Pollution Control Regulation No. 9.

6. Use of the air pollution control device shall not be required whenever the VOC content of the coating as applied to the coating applicator does not exceed 2.9 lbs. of VOC per gallon, excluding water and exempt VOC.

B. Operating Requirements: The following requirements are applicable when the method of compliance with Air Pollution Control Regulation No. 19 is the use of control devices.

1. The coating station enclosure shall be in place.

2. Air exhausted from the R&D line drying ovens and enclosure shall be vented to the carbon adsorber.

3. All access doors and windows in the coating station enclosure shall be closed during routine operation of the coating equipment. Brief, occasional openings of doors to allow for access and inspection are acceptable.

4. Air passing through any opening in the capture system shall flow into the enclosure continuously.

5. To ensure 100 percent capture of the VOC generated, the R&D coating line must be equipped with a total enclosure. The total enclosure must meet the criteria for a permanent total enclosure in 40 CFR Part 51, Appendix M, Method 204 – "Criteria For and Verification of a Permanent or Temporary Total Enclosure".

6. The total air flow discharged to the carbon adsorber shall not exceed 2000 scfm, the maximum loading capacity of the carbon adsorber.

7. The carbon adsorber shall be operated according to its design specifications.

C. Monitoring

1. The VOC concentration at the outlet of the carbon adsorber shall be measured and recorded after every application of 40 lbs of coatings that require the use of the air pollution control device. Breakthrough shall be deemed to have occurred if the carbon adsorber outlet concentration exceeds 20 ppmv. Should the outlet concentration exceed 20 ppmv, and testing by the owner/operator demonstrates that the outlet concentration does not exceed 5% of the inlet concentration, then breakthrough of the carbon adsorber shall not be deemed to have occurred.

2. When toluene is the principal solvent in the VOC-based coatings being applied, the VOC concentration at the outlet of the carbon adsorber may be measured as toluene, using a Drager® or Gastec® direct-reading gas measurement system (or equivalent) that employs detector tubes capable of measuring toluene within the range of 5 to 300 ppmv. The gas measurement system is to be used in a manner consistent with the manufacturer's instructions.

3. If toluene is not the principal solvent being applied, and/or the owner/operator measures for VOC using a methodology other than the Drager® or Gastec® direct-reading gas measurement system (or equivalent), the device that is used shall be calibrated with each use and used in a manner consistent with the manufacturer's instructions.

4. The static pressure within the enclosure shall be monitored and recorded in a log whenever coatings containing VOC are applied.

5. The enclosure shall be inspected semi-annually and should include all the items required to demonstrate that the permanent total enclosure criteria as established in 40 CFR Part 51, Appendix M, and Method 204 "Criteria for Verification of a Permanent or Temporary Total Enclosure" are maintained.

D. Stack Testing

1. Initial performance testing of the carbon adsorber shall be conducted within 180 days of start-up 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 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. The Office of Air Resources recognizes that the R&D fabric coating line will be used for research and development purposes only, and that individual coating trials using this coating line will typically be only 5 to 10 minutes in duration. While it is intended that the control efficiency of the carbon adsorber be determined using an USEPA-approved test method, the Office of Air Resources recognizes that a modified test methodology may be required in order to account for the shortened operating times.

4. The owner/operator shall install any and all test ports or platforms necessary to conduct the required emissions 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 or air quality standards.

6. A final report of the results of emission testing shall be submitted to the Office of Air Resources no later than 60 days following completion of the testing.

7. All stack testing must be observed by the Office of Resources or its authorized representatives to be considered acceptable, unless the Office of Air Resources provides authorization to the owner/operator to conduct the testing without an observer present.

E. Record Keeping and Reporting

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

    a. The name, identification number and amount of each coating used on the R&D coating line;

b. For each coating applied with the control device in-use, 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 each month;

c. For each coating applied with the control device not in-use, the mass of VOC per unit volume of coating, the volume of water content, and the mass of VOC per unit volume of coating minus water;

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

e. A log of operating time for the capture system, carbon adsorber, monitoring equipment, and the R&D coating equipment;

f. The VOC inlet and outlet concentrations from the carbon adsorber used to comply with the requirements of this permit; and,

g. A maintenance log for the capture system, carbon adsorber, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

2. The owner/operator shall, on a monthly basis, no later than 10 business days after the first of the month, determine the total quantity of VOC discharged to the atmosphere from the R&D line. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

3. The owner/operator shall, on a monthly basis, no later than 10 business days after the first of the month, determine the total quantity of each HAP discharged to the atmosphere from the R&D line. 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, on a monthly basis, no later than 10 days after the first of the month, determine the total quantity of each listed toxic air contaminant discharged to the atmosphere from the R&D line. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

5. Notwithstanding the above, the owner/operator shall not be required to determine the quantity of VOC, HAP or listed toxic air contaminants discharged if the total quantity of VOC-containing coating applied during the month does not exceed forty (40) pounds.

6. The owner/operator shall record the date of the inspection of the permanent total enclosure and maintain the check list that is used to verify PTE configuration and maintenance status and exhaust system conditions.

7. The owner/operator shall record in an operating log the static pressure within the enclosure once during each R&D coating trial where coatings containing VOC are applied. The date, time and measurement shall be recorded.

8. 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 R&D coating line by sending a copy of the record to the Office of Air Resources within 30 days following the occurrence.

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 the date of actual start-up of the R&D coating line and carbon adsorber, no later than 15 days after such date.

11. The owner/operator, before changing the method of compliance from control devices to daily-weighted averaging or complying coatings, shall submit a Compliance Certification Plan to the Office of Air Resources for review and approval. Such plan shall include:

    a. The name and location of the facility;

    b. The name, address and telephone number of the person responsible for the facility;

    c. The name and identification number of the emission units which will comply by means of daily-weighted averaging or complying coatings;

    d. For daily-weighted averaging:

        (1) 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 emission unit;

        (2) The method by which the owner/operator will create and maintain records each day as required by Subsection 19.5.2(c) of APC Regulation No. 19;

        (3) The time at which the facility's day begins if a time other than midnight local time is used to define a day.

    e. For complying coatings:

(1) The name and identification number of each coating, as applied, on each coating line or operation;

(2) The mass of VOC per volume coating (excluding water) and the volume of each coating (excluding water), as applied;

(3) The time at which the facility's day begins if a time other than midnight local time is used to define a day.

f. Information describing the effect of the change on the emissions of any air contaminant.

g. A demonstration that emissions from the stationary source will not cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by APC Regulation No. 22.

12. 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.

13. Deviations from permit conditions, 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.

14. 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 equipment shall be designed, constructed and operated in accordance with the representation of the equipment in the permit application.

2. The owner/operator shall shut down the R&D coating line equipment in the event of a malfunction of the emission capture system and/or carbon adsorber that results in or that could result in, emissions in excess of the permit limits. The coating equipment shall remain shut down until the malfunction has been identified and corrected.

3. There shall be no by passing of the carbon adsorber during times when the method of compliance with Air Pollution Control Regulation No. 19 is the use of control devices.

4. The owner/operator shall provide documentation within 60 days of issuance of this permit that the emission capture systems designed for the R&D coating line meets the criteria for a permanent total enclosure as specified in Condition No. B.5.

5. 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.

6. 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.