

21 February 2005

Ms. Joanne Bagley, President
Kenyon Industries, Inc.
36 Sherman Avenue
Shannock, RI 02875

Dear Ms. Bagley:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your request to replace the heat exchanger system and insulate associated ductwork on C001, the AirTech thermal oxidizer, Model No. LV-CF-5 permitted under Approval No. 900. Approval No. 900 was issued on 1 July 1988 for the installation of the AirTech oxidizer to control VOC emissions from coaters KK-1 and KK-2 at your 36 Sherman Avenue, Shannock facility.

This submission fulfills your obligation under Condition II.AA.4 of your operating permit to notify the Office of Air Resources of any physical or operational change to the emissions units and control devices identified in the permit.

Based on the representations made in this submission, the Office of Air Resources has determined that the planned changes will not violate any existing permit term or condition under Approval No. 900 or increase allowable emissions under the permit and therefore Approval No. 900 will not require a permit revision.

However, based on the air quality modeling conducted in association with the planned modifications and the notification of a revised coating application rate on your KK-4 fabric coating line, we determined that revisions to Approval Nos. 1738-1739 were necessary. Approval Nos. 1738-1739 was issued 7 February 2003 (revised 27 April 2004) for the installation of a Smith Engineering Recuperative Thermal Oxidizer and the KK-4 fabric coating line.

Enclosed are revised permit conditions and emission limitations for the minor source permit (Approval Nos. 1738-1739). Be advised that these revisions were made utilizing the Acceptable Ambient Levels (AALs) in APC Regulation No. 22 that were in effect at the time this permit was originally issued. APC Regulation No. 22 was revised on 27 April 2004. The AALs for toluene

and xylene in the revised regulation are different than those in the previous version of the regulation. The AALs for toluene and xylene from the revised regulation will be used in the evaluation of your application for renewal of your Air Toxics Operating Permit. This may result in emission limitations for toluene and xylene that are different than those determined as part of the review of the heat exchanger replacement.

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

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

MINOR SOURCE PERMIT

KENYON INDUSTRIES, INCORPORATED

APPROVAL NOs. 1738-1739
(revised February 2005)

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

Kenyon Industries, Incorporated

For the following:

Revision to Condition A.6 to decrease the allowable VOC emission limitation from fabric coating line KK-4. Revisions to A.7 and A.8 decrease the allowable toluene and xylene emission limitations from fabric coating lines KK-4, KK-5 and KK-6. Revisions to F.1 and F.2 to decrease the allowable toluene and xylene emission limitation from fabric coating lines KK-1 and KK-2.

Located at: 36 Sherman Avenue, Shannock

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, 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

KENYON INDUSTRIES, INCORPORATED

Approval Nos. 1738-1739
(revised February 2005)

A. Emission Limitations (KK-4, KK-5 and KK-6 coating lines)

1. VOC emissions generated from the KK-4, KK-5, and KK-6 fabric coating lines shall be captured and contained for discharge to an air pollution control device for VOC.
2. VOC emissions generated from the KK-4 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 destruction of this VOC.
3. VOC emissions generated by the KK-5 and KK-6 fabric coating lines shall be reduced by 95 percent or greater. This is to be achieved through a combination of 97 percent capture of the VOC generated by the coating line and 98 percent destruction of this VOC.
4. The destruction efficiency of the Smith thermal oxidizer for VOC shall be at least 98 percent.
5. The total quantity of VOC discharged to the thermal oxidizer shall not exceed 705 lbs per hour, the maximum loading capacity of the oxidizer.
6. The total quantity of VOC applied to the substrate on KK-4 shall not exceed 111,667 lbs. per month (12 month rolling average).
7. The total quantity of toluene applied to the substrates on KK-4, KK-5 and KK-6 shall not exceed the following:
 - a. 422.7 lbs. per hour for KK-5 and KK-6 combined, and;
 - b. 654.3 lbs. per hour for KK-4, KK-5 and KK-6 combined.

8. The total quantity of xylene applied to the substrates on KK-4, KK-5 and KK-6 shall not exceed the following:
 - a. 124.0 lbs. per hour for KK-5 and KK-6 combined, and;
 - b. 293.8 lbs. per hour for KK-4, KK-5 and KK-6 combined.
9. The total quantity of any one Hazardous Air Pollutant (HAP) applied to the substrate on KK-4 shall not exceed 75,000 lbs. per month (12 month rolling average).

B. Operating Requirements

1. The operating temperature of the thermal oxidizer shall be maintained at or above 1450°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 operating temperature of the thermal oxidizer shall never exceed 1500°F.
3. The KK-4, KK-5, and KK-6 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.
4. All access doors and windows in the coating station enclosures at KK-4 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 opening in the capture systems for KK-4, KK-5 or KK-6 shall flow into the enclosures continuously.
6. To ensure 100 percent capture of the VOC generated, the KK-4 coating line must be equipped with a total enclosure. This total enclosure must meet the criteria for a permanent total enclosure contained in 40 CFR Part 51, Appendix M, Method 204 – “Criteria For and Verification of a Permanent or Temporary Total Enclosure”.
7. All cleaning of the KK-4, KK-5, and KK-6 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 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. 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 on the KK-4, KK-5, and KK-6 coating lines;
 - 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 capture systems, thermal oxidizer, monitoring equipment, KK-4, KK-5, and KK-6 coating equipment;
 - e. A maintenance log for the capture systems, 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°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 shall, on a monthly basis, no later than 5 business days after the first of the month, determine the total quantity of VOC applied to the substrate on KK-4 for the previous 12 months. 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 notify the Office of Air Resources, within 15 days, whenever the total quantity of VOC applied to the substrate on KK-4 exceeds 111,667 lbs. per month (12 month rolling average).
4. The owner/operator shall, on a daily basis determine:
- a. the total quantity of toluene applied to the substrate on KK-5 and KK-6 combined, and;
 - b. the total quantity of toluene applied to the substrate on KK-4, KK-5 and KK-6 combined, and;
 - c. the total quantity of xylene applied to the substrate on KK-5 and KK-6 combined, and;
 - d. the total quantity of xylene applied to the substrate on KK-4, KK-5 and KK-6 combined, and;
 - e. the total quantity of toluene applied to the substrate on KK-1 and KK-2 combined, and;
 - f. the total quantity of xylene applied to the substrate on KK-1 and KK-2 combined, and;

The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

5. The owner/operator shall notify the Office of Air Resources, within 24 hours, whenever:
 - a. the total quantity of toluene applied to the substrate on KK-5 and KK-6 combined exceeds 422.7 lbs. per hour, and;
 - b. the total quantity of toluene applied to the substrate on KK-4, KK-5 and KK-6 combined exceeds 654.3 lbs. per hour, and;
 - c. the total quantity of xylene applied to the substrate on KK-5 and KK-6 combined exceeds 124.0 lbs. per hour, and;
 - d. the total quantity of xylene applied to the substrates on KK-4, KK-5 and KK-6 combined exceeds 293.8 lbs. per hour, and;
 - e. the total quantity of toluene applied to the substrate on KK-1 and KK-2 combined exceeds 295.9 lbs. per hour, and;
 - f. the total quantity of xylene applied to the substrate on KK-1 and KK-2 combined exceeds 165.2 lbs. per hour.
6. The owner/operator shall, on a monthly basis, no later than 5 business days after the first of the month, determine the total quantity of each HAP applied to the substrate on KK-4 for the previous 12 months. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
7. The owner/operator shall notify the Office of Air Resources, within 15 days, whenever the total quantity of any one HAP applied to the substrate on KK-4 exceeds 75,000 lbs. per month (12 month rolling average).
8. The owner/operator must notify the Office of Air Resources no later than 24 hours after an exceedance of any of the emission limitations in Conditions A.2, A.3 or A.4 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.

9. 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 KK-4, KK-5, or KK-6 lines by sending a copy of the record to the Office of Air Resources within 30 days following the occurrence.
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 the date of actual start-up of the KK-4 coating line, no later than 15 days after such date.
12. The owner/operator shall notify the Office of Air Resources in writing of the date of actual start-up of the Smith Engineering thermal oxidizer, no later than 15 days after such date.
13. The owner/operator shall notify the Office of Air Resources in writing of the date the modifications specified in Condition F.11 are completed no later than 15 days after such date.
14. 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.
 - f. Information describing the effect of the change on 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.
15. 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.

16. 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. The total combined quantity of toluene applied to the substrates on KK-1 and KK-2 shall not exceed 295.9 lbs./hr.
2. The total combined quantity of xylene applied to the substrates on KK-1 and KK-2 shall not exceed 165.2 lbs./hr.
3. 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 Environmental Science Services, Inc., dated 19 August 2002, as amended.
4. The owner/operator shall shut down the KK-4, KK-5, or KK-6 fabric coating 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.
5. There shall be no bypassing of the thermal oxidizer during times when VOC is being discharged to the control device.
6. The owner/operator shall provide documentation within 60 days of issuance of this permit that the emission capture systems designed for the KK-4 coating line meets the criteria for a permanent total enclosure as specified in Condition No. B.6.
7. The owner/operator shall provide documentation within 60 days of issuance of this permit to demonstrate that the emission capture systems in place for the KK-6 coating line is similar in design to the KK-5 coating line.
8. Approval No. 810 issued for the installation of coating line KK-5 and an AirTech Systems recuperative thermal oxidizer is revoked. This revocation will become effective when KK-5 is switched over to the Smith Engineering thermal oxidizer (Approval No. 1739).
9. Approval No. 506 and 507 issued for the installation of coating line KK-6 and a solvent recovery system is revoked. This revocation will become effective when KK-6 is switched over to the Smith Engineering thermal oxidizer (Approval No. 1739).
10. 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.

11. 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.
12. Operation of the KK-4, KK-5, and KK-6 coating lines while discharging VOC to the Smith Engineering thermal oxidizer shall not commence until the following modifications are complete;
 - a. Extending the discharge height of the Steam Frame 3 stack on Building 5 to 14.3 feet above the roof.
 - b. Connect the Blend Room Vents 1 and 2 to the Smith thermal oxidizer.
 - c. Removing the rain hat on the National heat set oven hood vent.
 - d. Redirecting the direction of the Calender No. 9 vent stack to discharge vertical upward, exhausting 6 feet above the roof.
 - e. Extending the discharge height of the general ventilation roof fan No. 1 stack to 6 feet above the roof.

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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