9 March 2004

Ms. Gale A. Gennaro
Director, Office of Environmental Health and Safety
Providence College Department of Physical Plant
Huxley Avenue
Providence, RI 02918

Dear Ms. Gennaro:

The Department of Environmental Management, Office of Air Resources, has reviewed and approved your application for the installation of fuel burning equipment at your facility on Huxley Avenue, Providence.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval Nos. 1789-1791).

In your application, you also requested that your emissions cap be revised to reflect these changes to your facility. After receipt of the notification required in Condition E.2 for the last of the three boilers, we will prepare a draft emissions cap and provide you a copy for your review and comment prior to publishing public notice. Please be advised that until your emissions cap is revised to be consistent with this minor source permit, the limitations in that emissions cap apply. Modifications of an emissions cap are subject to public comment.

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: Providence Building Official

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

MINOR SOURCE PERMIT

PROVIDENCE COLLEGE

APPROVAL NOs. 1789 - 1791

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

Providence College

For the following:

Installation of three new Cleaver Brooks Model No. CB-LE 400-227-150 firetube boilers (Approval Nos. 1789-1791). The new boilers shall replace existing boilers B001 and B002. Each new boiler shall utilize a low-NO_x burner and flue gas recirculation. All fuel burning equipment is to be fired with either natural gas or No. 6 fuel oil containing 1.0% sulfur, by weight or less.

Located at: *Huxley Avenue, Providence*

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 *Providence College* **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

PROVIDENCE COLLEGE

APPROVAL NOS. 1789-1791

A. Emission Limitations – The following emission limitations are applicable to three (3) 9.5 MMBTU/hr Cleaver Brooks boilers, Model No. CB-LE 400-227-150, equipped with low-NOx burners and flue gas recirculation, capable of burning No. 6 fuel oil or natural gas:

1. Natural Gas Firing

   a. Nitrogen oxides (as nitrogen dioxide (NO_2))

      The emission rate of nitrogen oxides discharged to the atmosphere from each boiler shall not exceed 0.036 lbs per million BTU heat input or 0.34 lbs/hr, whichever is more stringent.

   b. Carbon Monoxide (CO)

      The emission rate of carbon monoxide discharged to the atmosphere from each boiler shall not exceed 0.11 lbs per million BTU heat input or 0.35 lbs/hr, whichever is more stringent.

   c. Total Nonmethane Hydrocarbons (NMHC)

      The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from each boiler shall not exceed 0.016 lbs per million BTU heat input or 0.15 lbs/hr, whichever is more stringent.

2. Oil Firing

   a. Nitrogen Oxides (as nitrogen dioxide (NO_2))

      The emission rate of nitrogen oxides discharged to the atmosphere from each boiler shall not exceed 0.505 lbs per million BTU heat input or 4.79 lbs/hr, whichever is more stringent.

b. Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from each boiler shall not exceed 0.08 lbs per million BTU heat input or 0.71 lbs/hr, whichever is more stringent.

c. Sulfur Dioxide (SO_2)

(1) All fuel burned in the boilers shall contain no more than 1 percent sulfur by weight.

(2) The emission rate of sulfur dioxide discharged to the atmosphere from each boiler shall not exceed 9.79 lbs/hr.

d. Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from each boiler shall not exceed 0.081 lbs per million BTU heat input or 0.75 lbs/hr, whichever is more stringent.

e. Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from each boiler shall not exceed 0.035 lbs per million BTU heat input or 0.33 lbs/hr, whichever is more stringent.

B. Operating Requirements

1. The maximum firing rate of each boiler shall not exceed 63.3 gal/hr of No.6 fuel oil or 9,350 ft^3/hr of natural gas, based on a higher heating value (HHV) of 1,016 BTU/ft^3.

2. The owner/operator shall limit the combined quantity of No. 6 fuel oil and natural gas combusted in the three (3) boilers to comply with the 1,250,000 gallon facility-wide cap limit of No. 6 fuel oil equivalents or less for any consecutive 12 month period contained in the facility's Emission Cap.

3. The flue gas recirculation system for each boiler shall be in full operation whenever each boiler is in operation and firing natural gas.

4. Visible emissions from the boiler stack shall not exceed 10% opacity (6-minute average).

C. Continuous Monitors

1. Continuous emission monitoring equipment shall be installed, operated and maintained for opacity when any boiler is operating on fuel oil.

2. Natural gas and fuel oil flows for each boiler shall be continuously measured and recorded.

D. Fuel Oil Testing

1. Compliance with fuel oil sulfur limits may be determined based on a certification from the fuel supplier.

2. Fuel supplier certification shall include the following information:

   a. The name of the oil supplier;

   b. The sulfur and nitrogen content of the fuel oil from which the shipment came or of the shipment itself;

   c. The location of the oil when the sample was drawn for analysis to determine the nitrogen and sulfur content of the oil, specifically including whether the oil was sampled as delivered to Providence College or whether the sample was drawn from oil in storage at the oil suppliers/refiners facility or another location;

   d. The method used to determine the sulfur and nitrogen content of the oil.

3. As an alternative to fuel supplier certification, the owner/operator may elect to sample the fuel prior to combustion. Sampling and analysis shall be conducted for the oil in the initial tank of oil to be fired in the boilers and after each new shipment of oil is received. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted.

4. Each fuel supplier certification or each fuel oil analysis must demonstrate that the oil for the boilers contains 1 percent sulfur by weight or less.

E. Record Keeping and Reporting

1. The owner/operator shall, on a monthly basis, no later than 5 days after the first of the month, determine the fuel use in the three (3) new boilers 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. All fuel combusted in these boilers shall be included in the determination of fuel use for the entire facility under Condition C.1 of Providence College's emission cap.

2. The owner/operator shall notify the Office of Air Resources in writing of the date of actual initial start-up of each boiler no later than fifteen days after such date.

3. The owner/operator shall notify the Office of Air Resources in writing of any 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 of 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.

4. The owner/operator shall maintain copies of all fuel supplier certifications or fuel analyses and these copies shall be made accessible for review by the Office of Air Resources or its authorized representative and EPA. These records shall include a certified statement, signed by the owner/operator of the facility, that the records represent all of the fuel combusted in the boilers.

5. 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.

6. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit 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.

7. All records required as a condition of this approval must be made available to the Office of Air Resources or its representative upon request. These records must be maintained for a minimum of five years after the date of each record.

F. Other Permit Conditions

1. To the extent consistent with the requirements of this approval 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 prepared by Quonset Environmental Associates dated November 2003.

2. 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.

3. 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.

4. The existing boilers, B001 (25.79 MMBTU/hr) and B002 (39.0 MMBTU/hr), shall be removed from service or rendered inoperable on or before the startup of the last of the three new boilers (Approval Nos. 1789-1791).

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