1 December 2006

Mr. Henry Huppert
Brown University
Office of Environmental Health & Safety
164 Angell Street, Box 1914
Providence, RI 02912

Dear Mr. Huppert:

The Department of Environmental Management, Office of Air Resources, has reviewed and approved your application for the installation of fuel burning equipment at your 235 Lloyd Avenue, Providence facility.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval Nos. 1951-1952).

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: Providence Building Official
Charlotte Head

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

MINOR SOURCE PERMIT

Brown University

APPROVAL NOs. 1951-1952

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

Brown University

For the following:

Installation of two temporary boilers, a 700 HP Cleaver Brooks Model CB 200-700-150 and a. 800 HP Cleaver Brooks Model CB 200-800-150. Each temporary boiler is to be fired with No. 2 fuel oil containing 0.5% sulfur, by weight, or less.

Located at: *235 Lloyd 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 *Brown University* **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

Brown University

Approval Nos. 1951-1952

A. Emission Limitations

1. 700 HP Cleaver Brooks boiler

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

The emission rate of nitrogen oxides discharged to the atmosphere from the 700 HP temporary boiler shall not exceed 0.25 lb per million BTU heat input or 7.27 lbs/hr, whichever is more stringent.

b. Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from the 700 HP temporary boiler shall not exceed 0.07 lb per million BTU heat input or 2.05 lb/hr, whichever is more stringent.

c. Sulfur Dioxide (SO_2)

(1) All fuel burned in the 700 HP temporary boiler shall contain no more than 0.5 percent sulfur by weight.

(2) The emission rate of sulfur dioxide discharged to the atmosphere from the 700 HP temporary boiler shall not exceed 15.08 lbs/hr.

d. Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from the 700 HP temporary boiler shall not exceed 0.024 lb per million BTU heat input or 0.70 lb/hr, whichever is more stringent.

e. Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from the 700 HP temporary boiler shall not exceed 0.025 lb per million BTU heat input or 0.73 lb/hr, whichever is more stringent.

2. 800 HP Cleaver Brooks boiler

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

The emission rate of nitrogen oxides discharged to the atmosphere from the 800 HP temporary boiler shall not exceed 0.25 lb per million BTU heat input or 8.31 lbs/hr, whichever is more stringent.

b. Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from the 800 HP temporary boiler shall not exceed 0.07 lb per million BTU heat input or 2.34 lb/hr, whichever is more stringent.

c. Sulfur Dioxide (SO_2)

(1) All fuel burned in the 800 HP temporary boiler shall contain no more than 0.5 percent sulfur by weight.

(2) The emission rate of sulfur dioxide discharged to the atmosphere from the 800 HP temporary boiler shall not exceed 17.24 lbs/hr.

d. Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from the 800 HP temporary boiler shall not exceed 0.024 lb per million BTU heat input or 0.81 lb/hr, whichever is more stringent.

e. Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from the 800 HP temporary boiler shall not exceed 0.025 lb per million BTU heat input or 0.84 lb/hr, whichever is more stringent.

3. Visible emissions from each temporary boiler shall not exceed 10% opacity (6-minute average).

B. Operating Requirements

1. The maximum firing rate of the 700 HP temporary boiler shall not exceed 209.2 gallons per hour of No. 2 fuel oil.

2. The maximum firing rate of the 800 HP temporary boiler shall not exceed 239.1 gallons per hour of No. 2 fuel oil.

3. The total quantity of fuel oil combusted in the two boilers shall not exceed 451,914 gallons.

C. Continuous Monitors

1. Continuous emission monitoring equipment shall be installed, operated and maintained for opacity when each temporary boiler is in operation.

D. Fuel Oil Testing

1. Compliance with fuel oil sulfur limit 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. A statement from the oil supplier that the oil complies with the specification for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396-78 "Standard Specification for Fuel Oils";

c. The sulfur content of the fuel oil; and

d. The method used to determine the sulfur 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 temporary 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.

E. Record Keeping and Reporting

1. The owner/operator shall determine the total quantity of fuel combusted in the temporary boilers. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

2. The owner/operator shall notify the Office of Air Resources, in writing, of the date of initial start-up of the temporary boilers, no later than five business days after such date.

3. The owner/operator shall notify the Office of Air Resources, in writing, of the date of removal of the temporary boilers, no later than five business days after such date.

4. 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 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.

5. The owner/operator shall retain copies of all fuel supplier certifications or fuel oil analyses for each calendar quarter. These records shall be made accessible for review by the Office of Air Resources or EPA. This quarterly record shall include a certified statement, signed by the owner/operator, that the records of fuel supplier certifications or fuel oil analyses submitted represent all of the fuel combusted by the temporary boiler during the quarter.

6. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance of the temporary boilers with the terms of this permit or any other applicable air pollution control rules and regulations.

7. 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.

8. 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 temporary boilers shall be designed, constructed and operated in accordance with the representation of the facility in the permit application.

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 by the Office of Air Resources to be maintained.

3. The temporary boilers may be subject to the requirements of the Federal New Source Performance Standards 40 CFR 60, Subparts A (General Provisions) and Dc (Small Industrial-Commercial-Institutional Steam Generating Units). Compliance with all applicable requirements therein is required.

4. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the temporary boilers 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.