

12 February 2007

Mr. George C. Caras
Raytheon Company
1847 West Main Road
Portsmouth, RI 02871

Dear Mr. Caras:

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 located at 1847 West Main Road, Portsmouth.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval Nos. 1956-1957).

During the course of our review of your application, we determined that the fuel burning equipment located at 1847 West Main Road was installed in 2001 and 2002. Raytheon Company failed to obtain a preconstruction permit prior to the installation of this equipment as required by RI Air Pollution Control Regulation No. 9.

The issuance of this permit does not limit or otherwise preclude the RI DEM from pursuing enforcement actions to address the violations stated above.

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: Portsmouth Building Official

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

MINOR SOURCE PERMIT

RAYTHEON COMPANY

APPROVAL NOs. 1956-1957

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

Raytheon Company

For the following:

Installation of a Cleaver Brooks Model CBI-200-200 boiler in the Nimitz Building to be fired with either natural gas or No. 2 fuel oil containing 0.3 percent sulfur, by weight, or less (Approval No. 1956). Installation of a Cleaver Brooks Model CEW-200-200 boiler in the Providence Building to be fired with either natural gas or No. 2 fuel oil containing 0.3 percent sulfur, by weight, or less (Approval No. 1957).

Located at: *Raytheon Company*

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 *Raytheon Company* 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

RAYTHEON COMPANY

APPROVAL NOs. 1956-1957

A. Emission Limitations

1. The following emission limitations are applicable to the Cleaver Brooks Model No. CBI-200-200 boiler (B001) located in the Nimitz Building (Building No. 1).

a. Natural Gas Firing

(1) Nitrogen oxides (as nitrogen dioxide (NO₂))

The emission rate of nitrogen oxides discharged to the atmosphere from the boiler shall not exceed 0.10 lb per million BTU heat input or 0.82 lb/hr, whichever is more stringent.

(2) Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from the boiler shall not exceed 0.08 lb per million BTU heat input or 0.69 lb/hr, whichever is more stringent.

(3) Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from the boiler shall not exceed 0.006 lb per million BTU heat input or 0.04 lb/hr, whichever is more stringent.

b. Oil Firing

(1) Nitrogen Oxides (as nitrogen dioxide (NO₂))

The emission rate of nitrogen oxides discharged to the atmosphere from the boiler shall not exceed 0.14 lb per million BTU heat input or 1.16 lb/hr, whichever is more stringent.

(2) Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from the boiler shall not exceed 0.036 lb per million BTU heat input or 0.29 lb/hr, whichever is more stringent.

(3) Sulfur Dioxide (SO₂)

(a) All fuel burned in the boiler shall contain no more than 0.3 percent sulfur by weight.

(b) The emission rate of sulfur dioxide discharged to the atmosphere from the boiler shall not exceed 2.47 lbs/hr.

(4) Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from the boiler shall not exceed 0.024 lb per million BTU heat input or 0.19 lb/hr, whichever is more stringent.

(5) Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from the boiler shall not exceed 0.001 lb per million BTU heat input or 0.012 lb/hr, whichever is more stringent.

2. The following emission limitations are applicable to the Cleaver Brooks Model No. CEW-200-200 boiler (B006) located in the Providence Building (Building No. 2).

a. Natural Gas Firing

(1) Nitrogen oxides (as nitrogen dioxide (NO₂))

The emission rate of nitrogen oxides discharged to the atmosphere from the boiler shall not exceed 0.10 lb per million BTU heat input or 0.84 lb/hr, whichever is more stringent.

(2) Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from the boiler shall not exceed 0.08 lb per million BTU heat input or 0.70 lb/hr, whichever is more stringent.

(3) Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from the boiler shall not exceed 0.006 lb per million BTU heat input or 0.05 lb/hr, whichever is more stringent.

b. Oil Firing

(1) Nitrogen Oxides (as nitrogen dioxide (NO₂))

The emission rate of nitrogen oxides discharged to the atmosphere from the boiler shall not exceed 0.14 lb per million BTU heat input or 1.20 lb/hr, whichever is more stringent.

(2) Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from the boiler shall not exceed 0.036 lb per million BTU heat input or 0.30 lb/hr, whichever is more stringent.

(3) Sulfur Dioxide (SO₂)

(a) All fuel burned in the boiler shall contain no more than 0.3 percent sulfur by weight.

(b) The emission rate of sulfur dioxide discharged to the atmosphere from the boiler shall not exceed 2.56 lbs/hr.

(4) Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from the boiler shall not exceed 0.024 lb per million BTU heat input or 0.20 lb/hr, whichever is more stringent.

(5) Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from the boiler shall not exceed 0.001 lb per million BTU heat input or 0.012 lb/hr, whichever is more stringent.

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

B. Operating Requirements

1. The maximum firing rate of B001 shall not exceed 8,164 ft³/hr of natural gas or 58 gal/hr of No. 2 fuel oil.
2. The maximum firing rate of B006 shall not exceed 8,369 ft³/hr of natural gas or 60 gal/hr of No. 2 fuel oil.

C. Continuous Monitors

1. Continuous emission monitoring equipment shall be installed, operated and maintained for opacity when the boilers are operating on fuel oil.

D. Fuel Oil Testing

1. Compliance with the fuel oil sulfur limits may be determined based on a certification from the fuel supplier. Fuel supplier certifications shall include the following information:
 - a. The name of the fuel supplier;
 - b. The sulfur content of the fuel from which the shipment came or the shipment itself;
 - c. The location of the fuel when the sample was drawn for analysis to determine the sulfur content of the fuel, specifically including whether the fuel was sampled as delivered to Raytheon Company or whether the sample was drawn from fuel in storage at the fuel supplier's facility or another location;
 - d. The method used to determine the sulfur content of the fuel.
2. 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 fuel in the initial tank(s) of fuel to be fired in each fuel burning device and after each new shipment of fuel is received. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted.
3. Each fuel supplier certification or each fuel oil analysis must demonstrate that the oil contains 0.3 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 total quantity of No. 2 fuel oil and natural gas combusted in each boiler. 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 retain copies of all fuel supplier certifications 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 submitted represent all of the fuel combusted during the quarter.
3. 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.

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 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.
6. 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 facility 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 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 boilers identified in this permit 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.

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