UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

JAN 03 2017

URGENT LEGAL MATTER
REQUIRES PROMPT RESPONSE

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Bob O'Brien, Plant Manager
NRG Canal Generating Plant
9 Freezer Road
Sandwich, MA 02563

Re: Clean Air Act Reporting Requirement and Testing Order

Dear Mr. O'Brien:

The United States Environmental Protection Agency ("EPA") is evaluating whether the Canal Generating Plant located at 9 Freezer Road in Sandwich, Massachusetts ("Canal Station") is in compliance with certain requirements of the Clean Air Act ("CAA" or "Act") and its implementing regulations.

Section 114(a)(1) of the Act, 42 U.S.C. Section 7414(a)(1), gives EPA the authority to require any person who owns or operates any emission source to establish and maintain records, make reports, sample emissions, and provide such other information as may reasonably be required to enable EPA to determine whether such person is in compliance with the Act and its implementing regulations.

Reporting Requirement

This reporting requirement requires Canal Station to provide the information listed in each numbered paragraph below within 60 days of receipt of this letter. If Canal Station does not possess some or all of the records or documents that respond to a specific request below, explain why.

1. Provide the actual annual throughput of #6 oil by reporting the amount of #6 oil received and the amount of #6 oil used for the facility from 2011 to present (in gallons).

2. Provide a list of #6 oil receipts from 2011 to present. The list should include the date of receipt and the quantity of #6 oil received.

3. Calculate the maximum daily, monthly and annual design throughput capacity of # 6 oil for the facility. When providing the maximum capacity consider facility-specific limitations such as the number and storage capacity of storage tanks, any tank fill rate limitations, and any boiler use limitations. Provide a detailed description of how the maximum throughput capacity was calculated for the facility.

4. Provide a list of projected #6 oil shipments for 2017. The list should include the projected date of receipt as well as the quantity of #6 oil.

5. Describe each tank that stores #6 oil at the facility. Specifically include:
    a. Tank size information including storage capacity, height and diameter;
    b. Date that each tank became operational;
    c. Tank type (e.g. vertical fixed roof);
    d. Whether the tank is insulated and if so, specific surfaces insulated (e.g. sides, roof);
    e. A description of any heating system for the tank including heat input capacity for each tank (in mmBtu/hr per tank);
    f. The storage temperature of the #6 oil in the tank;
    g. Any controls used to reduce tank emissions. Include the removal efficiency of the controls and the date any media in the controls was last replaced;
    h. Types of vents on the tank as well as the vent pressure settings; and
    i. The dates vents and vent pressure settings were last tested.

6. For all equipment at the facility involved in the storage and transfer of #6 oil:
    a. Provide a list of each capital project, including but not limited to installations, repairs, and retrofits of tanks, transfer equipment (e.g. tank, pumps, piping) and support equipment (e.g. heating systems) which:
        i. Had actual or authorized expenditures of $10,000 or more; <u>and</u>
        ii. Had commenced construction since September 2013.
    b. For each project, provide the following information:
        i. Project description;
        ii. The purpose/function of the equipment;
        iii. The cost and date of purchase;
        iv. The date installation was completed;
        v. The date the equipment began operating;
        vi. The name of the manufacturer, model number, size, maximum production rate, and any other operational specifications; and
        vii. Information pertaining to any emission control devices associated with such process equipment, including the type of emission control device, when such device was installed, and any data pertaining to emission reductions from use of such device.
    c. The list should include, but not be limited to the following types of capital projects:
        i. Conversion of a storage tank to store #6 oil;

ii. Insulation of storage tanks and associated piping;
iii. Installation or replacement of large sections of piping;
iv. Installation or replacement of a heating system that is used to maintain temperature of #6 oil; and
v. Installation of any type of vapor collection and control system that is used to control odors and/or reduce emissions from the storage and distribution of #6 oil.

Testing Order

This Testing Order requires Canal Station to monitor and sample for volatile organic compound ("VOC") and hazardous air pollutant ("HAP") content the emissions from the headspace of a tank containing #6 oil at the Sandwich, MA location. Specifically, Canal Station shall sample VOC and HAP emissions either from facility Tank #3, which has a storage capacity of 8,890,728 gallons, or from Tank #4, which has a storage capacity of 8,887,248 gallons.

Canal Station must submit an emission test protocol, conduct emissions testing, and submit a test report in accordance with the schedule specified below:

Submit test protocol for EPA review and approval	Within 60 days of receipt of this Testing Order
Install sampling apparatus and begin VOC and HAP testing	Within 45 days of EPA approval of protocols or later if necessary to avoid weather-related sampling or safety concerns. However, in no case shall sampling commence any later than November 30, 2017.
Submit test report	Within 45 days after completion of testing.

Test Protocol

1. Submit a test protocol that follows the guidance provided in the EPA document entitled "Preparation and Review of Site-Specific Emission Test Plans," Emission Measurement Center Guideline Document (GD-042), Rev. Mary 1999. In addition to the EPA methods required in item 2, below, the test protocol shall include the following:
    a. Description of the tank to be tested, including number and type of ambient vents
    b. Photographs of the tank to be tested, including all unsealed tank penetrations (e.g. ambient vents, sample hatch)
    c. For the temporary total enclosure ("TTE") described below, identify the target static pressure, flow rate, and estimated airflow velocity across the tank vent
    d. Note that EPA's review of the test protocol may include a pre-test site visit.

VOC and HAP Emissions Testing

2. Conduct VOC and HAP testing for a minimum duration of 15 days. The emission testing program must include at least one tank filling event. Emissions testing shall be conducted using the following EPA methods:

    a. Method 204, *Criteria for and Verification of a Permanent or Temporary Total Enclosure ("TTE")*
        i. Capture VOC emissions from each ambient tank vent using a TTE.
        ii. Install straight ducting on the inlet Natural Draft Opening ("NDO") to measure TTE inlet flow and meet the requirements of a Method 1 sample location.
        iii. Configure the NDO to minimize the influence of wind on the enclosure.
        iv. Continuously measure and record ΔP of the TTE enclosure vs. ambient using a pressure transducer and a data recorder.
        v. Continuously measure and record ΔP between tank headspace and TTE space using a pressure transducer and a data recorder.

    b. Method 25A, *Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer*
        i. Continuously sample the TTE exhaust duct and the tank headspace for VOC concentration (as propane) using Method 25A.
        ii. Heat the Method 25A sample line and equip it with an oil mist/droplet (coalescing) filter.
        iii. Integrate data every 15 minutes at a minimum.
        iv. Conduct daily calibrations on the flame ionization analyzer.

    c. Method 2C, *Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)*
        i. Continuously measure and record TTE exhaust flow using a pressure transducer and a data recorder according to Method 2C.
        ii. Continuously measure and record NDO inlet flow according to Method 2C.

    d. Method 18, *Measurement of Gaseous Organic Compound Emissions by Gas Chromatography*, OR Method 320, *Measurement of Vapor Phase Organic and*

Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy

i. Determine methane concentration in the TTE exhaust using Method 18 or Method 320.

e. Method TO-15, *Determination of VOCs in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry*

i. Determine HAP concentrations at least once during the 15 day emissions test period using Method TO-15.

f. Method 4, *Determination of Moisture Content in Stack Gas*

i. Determine moisture in stack gas using Method 4.

g. During tank filling, calculate the TTE flow rate using either the tank filling rate, or EPA Method 2C.

h. Record the temperature of the #6 oil in the tank at least once per day during the testing.

i. Record the quantity of product (in gallons and percent capacity) stored in each tank at least once per day.

Test Report

3. Submit a test report to EPA. The test report shall follow the guidance provided in the EPA document entitled "Preparation and Review of Emission Test Reports," Emission Measurement Center Guideline Document (GD-043), December 1998. In addition to the standard report contents identified in the guidance, provide the following information in electronic format, when possible:
   a. Electronic copies of the Method 25A and TO-15 data in a common spreadsheet file format;
   b. Hourly, daily, and annual VOC emission rates;
   c. Annual single HAP and total HAPs emission rate;
   d. Total annual VOC and HAP emissions for all No. 6 residual oil tanks at the facility;
   e. Photographs of the sampling system;
   f. A description of any maintenance (or other repairs or changes) done on the tanks, and/or any vapor collection and processing system between the date of receipt of this letter and the EPA-observed emissions test date, including a description of the reason(s) for such maintenance; and
   g. The data and results from any pre-test sampling and/or engineering studies the facility elects to conduct on the tanks and/or any vapor collection and processing

system between the date of receipt of this letter and the EPA-observed emissions test date, and any memos or reports that summarize the results of the same.

Submissions required by this Reporting Requirement and Testing Order shall be mailed to:

Susan Studlien, Director
Office of Environmental Stewardship
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912
Attn: Elizabeth Kudarauskas (OES 04-2)

Be aware that if Canal Station does not provide the information in a timely manner, EPA may order it to comply and may assess monetary penalties under Section 113 of the Clean Air Act. Federal law also establishes criminal penalties for providing false information to EPA. This letter is not subject to Office of Management and Budget review pursuant to the Paperwork Reduction Act, 44 U.S.C. Chapter 35.

Canal Station may, if desired, assert a business confidentiality claim covering part or all of the information requested, in the manner described by 40 C.F.R §2.203(b). Information subject to such a claim will be disclosed by EPA only to the extent, and by means of the procedures, set forth in 40 C.F.R. Part 2, Subpart B. Note that certain categories of information, such as emissions data, are not properly the subject of such a claim. If no such claim accompanies the information when it is received by EPA, the information may be made available to the public by EPA without further notice to Canal Station. Please be aware that states may have different rules and regulations governing the protection of confidential business information.

If you have any questions regarding this reporting requirement, please contact Elizabeth Kudarauskas, Environmental Engineer, at (617) 918-1564, or have your attorney call Tom Olivier, Senior Enforcement Counsel, at (617) 918-1737.

Sincerely,

Susan Studlien

Susan Studlien, Director
Office of Environmental Stewardship

Cc: Dan DiSalvio, MassDEP