



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 4, 2010

William H. Smagula, P.E., Director
PSNH Generation
Public Service of New Hampshire
P.O. Box 330
Manchester, NH 03305-0330

Re: Information Request for NPDES Permit Re-issuance, NPDES Permit No: NH0001473

Dear Mr. Smagula:

The New England Regional office of the United States Environmental Protection Agency (EPA or Agency) is developing a draft National Pollutant Discharge Elimination System (NPDES) Permit (No. NH0001473) for Public Service of New Hampshire's (PSNH or the Company) Schiller Station electrical generating facility in Portsmouth, New Hampshire (Schiller Station).

In support of this work, EPA is sending PSNH this information request letter pursuant to Section 308(a) of the Clean Water Act (CWA), 33 U.S.C. §1318(a).

CWA § 308(a) provides, in pertinent part, as follows:

[w]henever required to carry out the objective of this chapter, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this chapter; . . . (3) any requirement established under this section; or (4) carrying out section[] . . . 1342 . . . of this title – (A) the Administrator shall require the owner or operator of any point source to . . . (ii) make such reports, . . . and (v) provide such other information as he may reasonably require . . .

33 U.S.C. § 1318(a). Failure to comply with an EPA information request sent under CWA § 308(a) could subject the recipient of the request to an EPA enforcement action under CWA § 309, 33 U.S.C. § 1319.

Information Requested

I. Application for renewal of NPDES Permit No. NH001473

Schiller Station's current NPDES permit expired in September 1995. PSNH submitted a "timely and complete" application (dated June 1, 1995) to EPA. Therefore, the Station's NPDES permit has been administratively continued pursuant to 40 C.F.R. § 122.6(a). However, the application is now more than 15 years old and EPA is aware of several changes at the facility including: the retirement of generating unit 3; the relocation of the coal pile; the relocation of the wastewater basin; the re-piping of the wastewater treatment facility (outfall 016/017) to the cooling water discharges (outfall 002, 003, or 004); the modification of the station's unit 4 cooling water intake structure (installation of fiberglass screen across the intake structure and removal of trash racks within the screenhouse); the testing of various coal dust suppressant chemicals; and the installation of a state-of-the-art, wood-burning boiler.

Therefore, due to the dated nature of the 1995 application, EPA requests that Schiller submit a complete updated application that accurately describes its current operation(s). Please submit updated EPA NPDES application Forms 1 and 2C. Please include an up-to-date, clear line drawing of water flows, as required by 40 CFR Section 122.21(g)(2). Please ensure that the line drawing accurately depicts water flow through the facility with a water balance diagram, and includes the average flows at intake and discharge points, including the flows between units and/or treatment units. Also indicate all current sampling locations (including flow and temperature) on the line drawing, and provide a short written description of each location. Also, please provide a list of all chemicals used at the facility that are or have the potential to be discharged to the Piscataqua River from the station. Please include the dosage rate for such chemicals and the approximate amount used per year.

Please take special care to accurately characterize the discharge from any waste stream that has been added or modified since PSNH's 1995 application (e.g., any waste stream resulting from the installation of air pollution control equipment). Any such waste stream shall reflect current or anticipated operation. PSNH is required to fully characterize any such waste stream, including providing analytical results for any chemical or parameter that is believed present. Any discharge that PSNH fails to include and characterize in its revised application can not be permitted.

For example, for any and all waste stream(s) associated with operation of the wood-burning boiler for Unit 5 (Schiller installed in 2004 and which became operational in 2006) PSNH must include a line drawing of the water balance that shows the approximate average flows at the boiler's intake (make-up) and discharge points and between any unit associated with the boiler operation. Include the location at which any discharge from the boiler mixes with any other waste stream at Schiller Station that eventually is treated and/or discharges to the Piscataqua River. Please include a list of all chemicals added to the boiler water, including whether the make-up water obtained from the City of Portsmouth is de-chlorinated prior to use in the boiler. Please include the daily, monthly, and yearly amount of each chemical, in pounds, that is used for this unit. Please provide the chemical concentration of each chemical used, prior to waste stream mixing with any other waste stream. Provide these chemical concentrations on both a daily maximum and a monthly average basis.

Please submit this information within 45 days of receiving this request. Application data cannot be claimed as confidential business information and is not subject to 40 C.F.R. Part 2.

II. Thermal Discharge

1. In order to characterize the Station's thermal plume(s), EPA is requiring that PSNH conduct a thermal plume study of Schiller Station's discharge.

Beginning June 15, 2010 and ending September 15, 2010, please collect continuous temperature data using a series of thermistors in the Piscataqua River as follows:

Deploy thermistors at the approximate locations shown on the attached Figures 1 through 4 and deploy thermistors in location(s) to collect ambient Piscataqua River temperature. Please identify monitoring location(s) to collect the ambient Piscataqua River temperature. The ambient monitoring location(s) must be outside of the effects of the thermal plume(s) and will be used to determine background river temperature. Therefore, ambient temperatures must be recorded at locations upstream and downstream of Schiller's discharge. Ambient temperature readings may be taken near the surface.

For water depths greater than twenty (20) feet, use three (3) thermistors per location (one approximately six (6) inches below the water surface, one approximately one (1) foot above the river floor, and one approximately midway between the other two thermistors). For water depths less than twenty (20) feet, use two (2) thermistors per location (one approximately six (6) inches below the water surface, and one approximately one (1) foot above the river floor).

Thermistors should not be floating on the water surface.

The location of each thermistor should be recorded in two manners:

1. With Global Positioning System (GPS) coordinates; and
2. As an estimate of linear feet from the facility and from the shore, as well as an estimate of linear feet from the surface of the water.

The thermistors should be capable of collecting continuous temperature data, with a minimum of 12 temperature measurements recorded each hour.

Please report the following to EPA:

- Thermistor identifier;
- The location of each thermistor (both GPS coordinates and linear footage estimates);
- For each thermistor, report the hourly average, hourly maximum, and hourly minimum temperatures recorded for each hour (clocktime) measured each day. (The average, maximum, and minimum hourly values shall be calculated from a minimum of 12 temperature measurements recorded during that hour);
- The Station operating conditions on that day including:
 - the flow rate through each outfall (million gallons per day);
 - the max. and average temperature of the effluent from each outfall before mixing with the Piscataqua River;
 - the electrical output of each generating unit for that day; and
 - the ambient or background Piscataqua River temperature recordings for that day.

Beginning July 31, and continuing monthly thereafter until October 31, 2010, please provide a report to EPA that summarizes the data collected for the previous month (i.e., the first monthly report

(due July 31) will summarize data collected from June 15 – July 14, the second monthly report (due August 31) will summarize the data collected from July 15 – August 14, etc). The monthly report shall be postmarked no later than the 25th day of the month (i.e., first monthly report postmarked no later than July 25, etc). Please submit a written report that summarizes the data collected and provide the data in an electronic format (in a spreadsheet) either on disc or via email.

2. Please characterize the thermal component of all internal waste streams to which heat is or may be added from facility operations (e.g. boiler blowdown and equipment cooling). This characterization does not apply to Units' 4, 5, or 6 condenser cooling water, but does apply to Units' 4, 5, and 6 equipment cooling and boiler blowdown, as well as any other waste stream at Schiller Station to which heat is or may be added from facility operations. The units of the thermal component shall be characterized in terms of British Thermal Units (BTUs) per unit of time. Please provide the total daily heat load, the total monthly heat load, and the total yearly heat load for every waste stream to which heat is or may be added from Station operations, before mixing with any other waste stream. PSNH may estimate these values if actual measurements are not available. Please provide this information within 45 days of receipt of this information request.

Alternatively, if new, actual measurements are necessary in order to gather this information, then, beginning June 15, 2010, PSNH must provide the following information to EPA in monthly reports:

- a. The temperature difference (ΔT) between the incoming (ambient or background) water to the unit and the discharge (effluent) from the unit prior to mixing with any other waste stream. Intake and discharge temperature shall be measured continuously with a minimum of 12 readings per hour. Please report the daily maximum temperature difference, the average hourly temperature difference, the minimum temperature difference, and the average daily temperature difference.
- b. The waste stream flow that corresponds to each temperature measurement or calculation specified in part a above.
- c. The heat load, determined by calculation, that correspond to the measurements recorded in parts a and b above. For example, the hourly heat load shall be calculated using the average hourly temperature difference and the average hourly flow, in BTU/hr. Please provide this information in a separate spreadsheet for each waste stream that discharges heat.

Beginning July 31, please provide a report to EPA that summarizes the information collected for the previous month (i.e., the first monthly report (due July 31) will summarize data collected from June 15 – July 14, the second monthly report (due August 31) will summarize the data collected from July 15 – August 14, etc). The monthly report shall be postmarked no later than the 25th day of the month (i.e., first monthly report postmarked no later than July 25, etc). Please submit a written report that summarizes the information collected and provide the data in an electronic format (in a spreadsheet) either on disc or via email.

3. Please characterize the thermal component of once-through cooling water to which heat is or may be added from the condenser operation of Units 4, 5, and 6 and that is discharged to the Piscataqua River. The units of the thermal component shall be characterized in terms of British Thermal Units (BTUs) per unit of time. Please provide the total daily heat load, the total monthly heat load, and the total yearly heat load for each unit. Please provide this information within 45 days of receipt of this information request.

III. Cooling Water Intake Structure

In its October 2008 response to EPA's October 2007 Clean Water Act section 308 letter, PSNH stated that the installation and operation of wedgewire screens could be considered the Best Technology Available (BTA) for Schiller Station. PSNH also states, however, that a "... site specific study would be required to determine the appropriate wedgewire screen material and slot size ..."

Please report, with 45 days of receipt of this letter, on any progress made since the October 2008 submittal regarding Schiller's site specific wedgewire screen pilot study to determine screen material and slot size.

In the absence of any site specific information regarding the "availability" of wedgewire screens for use at Schiller Station, EPA has preliminarily determined, based on Schiller's October 2008 response, that closed-cycle cooling is the Best Technology Available (BTA) for Schiller Station.

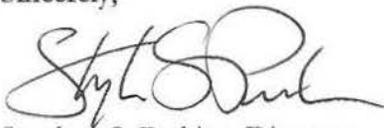
In PSNH's October 2008 response, PSNH states that "The use of mechanical draft cooling towers in a closed-cycle cooling configuration was determined to be technologically feasible ... however, the initial and ongoing costs are both wholly disproportionate to these benefits and are significantly higher than the costs of the other technologies ..." (see page v).

In its cover letter of the same submittal, Schiller states that "Notably, no cost/benefit assessment is or should be provided until the United States Supreme Court issues a decision in the Riverkeeper II case, ..." (see page 2 of cover letter from William H. Smagula, PSNH to Damien Houlihan, EPA).

Please explain PSNH's rationale for stating that the initial and ongoing capital costs of installing closed-cycle cooling are wholly disproportionate to the benefits when, notably, no cost/benefit assessment was provided. EPA points out that the referenced Supreme Court case was decided on April 1, 2009, in *Entergy Corp. v Riverkeeper, Inc.*, 129 S.Ct. 1498 (2009). Please submit this information within 45 days of receipt of this letter.

If you have any technical questions regarding this information request, please contact Damien Houlihan (617) 918-1586. If you have any legal questions, please direct them to Mark Stein at (617) 918-1077.

Sincerely,



Stephen S. Perkins, Director
Office of Ecosystem Protection

Enclosures: Figures 1 through 4

cc: Permit File;
Stergios Spanos, New Hampshire Department of Environmental Services, Water Division
Brian Kavanah, Maine Department of Environmental Protection
Linda T. Landis, Esq., PSNH
Elise N. Zoli, Esq., Goodwin Proctor

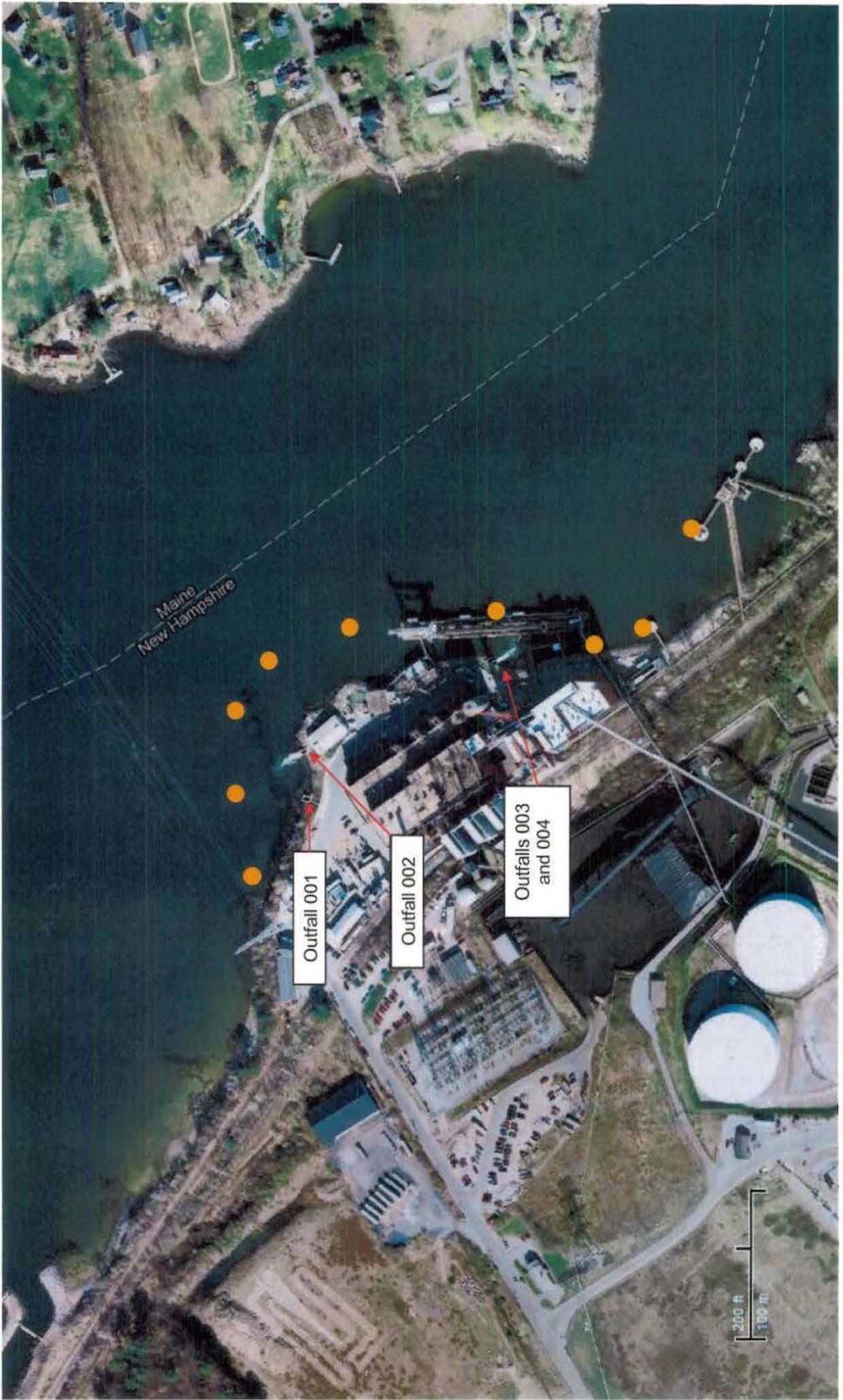


Figure 1: Approximate thermistor locations



Figure 2: Thermistor locations to north and north/east of Station

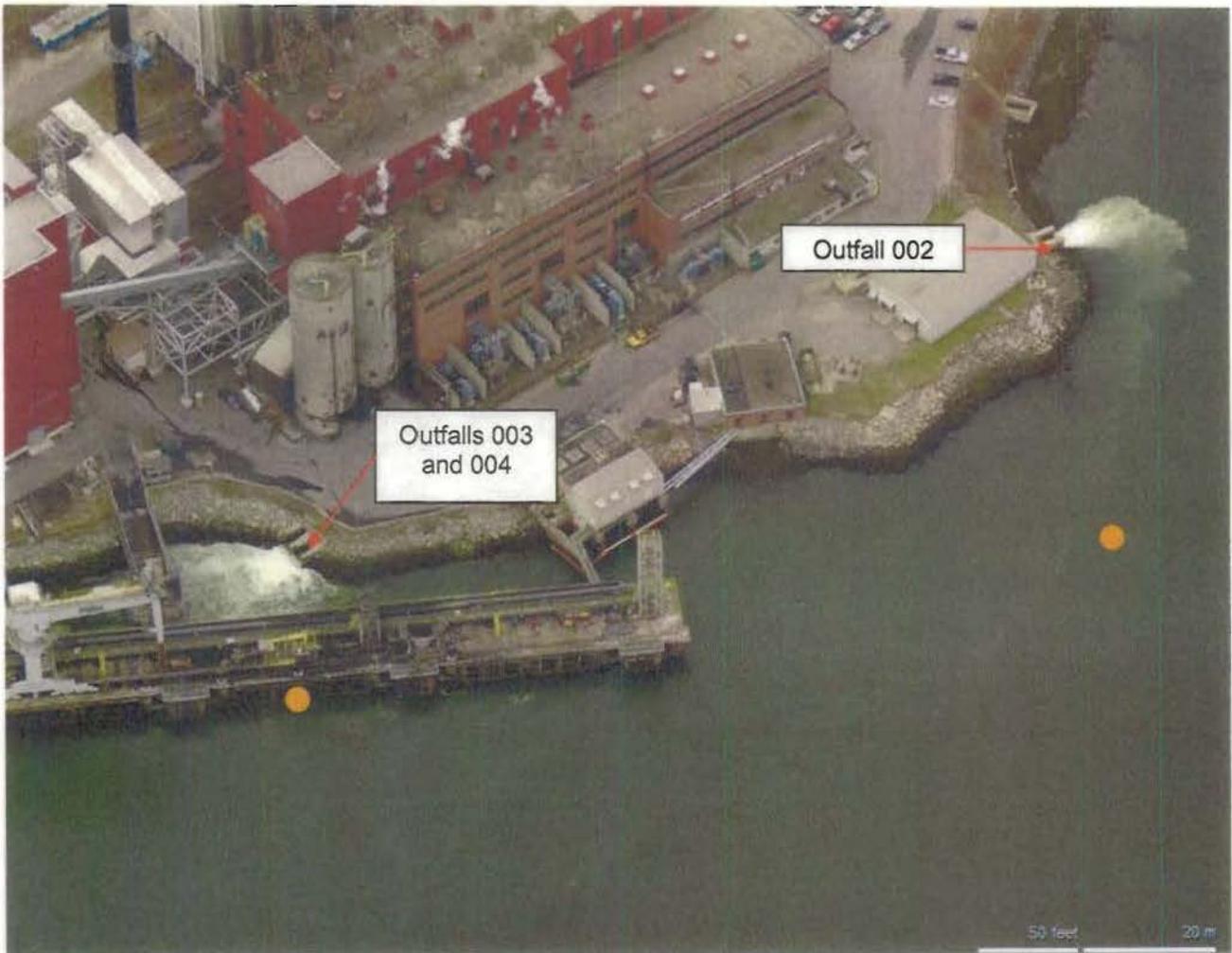


Figure 3: Thermistor locations to east of Station



Figure 4: Thermistor locations to south of Station