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VIA EMAIL & U.S. MAIL

Mark A. Stein
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**Re: Public Service Company of New Hampshire
Merrimack Station, Bow, New Hampshire
Draft NPDES Permit No. NH0001465**

Dear Attorney Stein:

In September 2011, Public Service Company of New Hampshire (d/b/a Eversource Energy) ("PSNH") received from the Environmental Protection Agency ("EPA" or the "agency") the draft National Pollutant Discharge Elimination System ("NPDES") permit for Merrimack Station. In its February 2012 response, PSNH provided detailed comments, including responsive data and other evidence, countering EPA's technology-based permit conditions and limits related to Sections 316(a) and (b) of the Clean Water Act. (Although a portion of the draft permit primarily related to the treatment of flue gas desulfurization wastewater was revised and reissued for comment last year, it was very limited in scope and did not address issues related to Sections 316 (a) and (b).)

By way of this letter, PSNH would like to point out a number of foundational errors that PSNH and its consultants recently identified in the agency's § 316(a) analysis in the draft permit. EPA based its decision to reject PSNH's request for a thermal discharge variance due, at least in part, to what we now recognize as a misinterpretation of some of the key thermal results presented in Normandeau Associates' ("Normandeau") April 2007 report

entitled "A Probabilistic Thermal Model of the Merrimack River Downstream of Merrimack Station" (the "Report"). PSNH was unaware of the source for this erroneous information until Dr. Larry Barnthouse, a PSNH consultant and a renowned fish biologist, identified certain data within the Report and linked it to EPA's analysis. Admittedly, any misinterpretation of the data by the agency is due to a lack of clarity in the Report itself as described in greater detail below, and we regret that it was not presented better. Fortunately, Dr. Barnthouse's review has identified this issue while there is still time to correct any faulty conclusions based in part on this misinterpretation and prior to the final permit being issued.

As an example, one of the errors in EPA's § 316(a) analysis can be found on page 120 of the agency's 2011 Fact Sheet (Attachment D) for the draft permit, which states in relevant part: "*The averaged daily maximum water temperature exceeded 83.0°F (28.3°C) ...every day at Station S-4 from June 15 to September 10.*" This quoted statement is clearly incorrect and reflects a misunderstanding of the Report content on at least two fronts. First, the maximum temperature values provided in Appendix A of the Report and quoted above from EPA's 2011 Fact Sheet represent the maximum daily average that occurred on a given calendar day typically only one time during the 21 years monitoring data was collected between 1984 and 2004 rather than the 21-year average of the daily maximum temperatures for each day of the calendar year (*i.e.*, the "averaged daily maximum"). Correctly interpreted, these data tables in Appendix A of the Report provide the minimum, average, and maximum of the daily average for each individual day during the 1984 through 2004 evaluation period and should not be interpreted to mean that these average limits necessarily occurred consecutively on any days within any given year.

Second, as emphasized in the previous statement, these individual-day data tables presented in Appendix A of the Report do not offer any analyses with respect to the duration specific temperatures occurred on any given day, much less whether such durations spanned multiple days. Thus, while it is correct that at some point in time during the 21-year data record analyzed in the Report the maximum daily water temperature at downstream Monitoring Station S-4 exceeded 83°F at least one time on each given calendar day between June 15 and September 10 during the 21-year monitoring period, it is not correct to conclude or assume from these facts that these temperatures occurred on consecutive days in every year or even consecutively on any given days in any single year during this 21-year period.

An example of this misinterpretation is illustrative. Appendix A of the Report provides that the maximum daily water temperature at downstream Monitoring Station S-4 in the Hooksett Pool on August 10th during the period 1984 through 2004 was 94.1°F. Although not reported in Appendix A, this single maximum daily water temperature among all 21 years of recorded data at Monitoring Station S-4 actually occurred on August 10, 1988. The maximum water temperature for August 11th among all 21 years of Monitoring Station S-4 data was 93.6°F, but this temperature occurred almost three years earlier, on August 11, 1985. In the end, none of the maximum (or minimum) water temperature values reported for Hooksett Pool Monitoring Stations N-10, S-0, or S-4 (A-0 is predicted) in Appendix A of the Report represent actual, consecutive maximum daily mean temperatures occurring within the same year. EPA therefore erred in assuming that the maximum temperatures are consecutive within the same year and in using the Appendix A data in this manner.

We hope this explanation is helpful to the agency. Please let us know if additional information or clarification is needed. We trust that any analyses and conclusions will be revised accordingly and properly reflected as such in a resulting revised draft permit and/or final permit.

Sincerely,

A handwritten signature in black ink that reads "Linda T. Landis". The signature is written in a cursive, flowing style.

Linda T. Landis, Esq.

cc: William H. Smagula, P.E., Vice President- Generation, Eversource Energy
Elizabeth H. Tillotson, Eversource Energy
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