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Public Service
of New Hampshire

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The Northeast Utilities System

September 18, 2008

D27262

Ms. Joy J. Hilton
U.S. Environmental Protection Agency
Region I
1 Congress Street, Suite 1100 (SEW)
Boston, MA 02114-2023

Reference: NPDES Permit No. NH0001473, Schiller Station, Public Service Company of New Hampshire, issued September 11, 1990; modified May 31, 1991; modified January 24, 1995.

Dear Ms. Hilton:

Schiller Station
Noncompliance Notification

In compliance with Part II, Section D.1.e., of the referenced NPDES Permit, Public Service Company of New Hampshire (PSNH) submits this noncompliance notification for Schiller Station located in Portsmouth, NH. On Thursday, September 11, 2008, Allan Palmer of PSNH phoned Tom Croteau of the NH Department of Environmental Services (DES) to inform him that a noncompliance may have occurred and that an investigation was underway. This letter is to provide you with the findings of the investigation.

At approximately 10:00 on Saturday, September 6, an equipment attendant (EA) washing the Unit 4 travelling screens noticed that sodium hypochlorite was being added to the circulating water. Because the chlorination cycle is usually turned off on the weekend, the EA mentioned his finding to a chemist on Monday morning. Upon inspection, it was discovered that the pumps had not been activated but that there was apparently a leak in the system. The system was tagged out of service at 14:40 on September 8.

Station personnel conducted a thorough investigation to determine the source and extent of the leak. The system was dismantled to perform tests on the individual components and manufacturers were contacted to help troubleshoot their equipment. Ultimately, the cause was linked to a back pressure valve connected to the diaphragm pump. It appears that the valve failed and allowed a small amount of chemical to leak through and enter the tubing that feeds the cooling water.

Follow-up testing estimated that a maximum of 76 gallons of sodium hypochlorite could have leaked into the system over the weekend period. The leak was small enough that routine cooling water samples analyzed for total residual chlorine on Friday and Monday did not detect unusual concentrations and confirmed compliance with the 0.2 mg/l permit limit. It is likely, however, that some amount of chlorination did occur over the roughly 50 hour time frame following our initial detection. This exceeds the two hour per day chlorination cycle allowed by the permit.

Plans are underway to add accessory check valves that the pump manufacturer offers to all three units to prevent this type of leak from reoccurring. Additionally, it was noted during the investigation that improvements could be made to better inventory the volume of sodium hypochlorite in the storage tank. Consequently, the instrumentation is being upgraded to include a level indicator and to temporarily store inventory readings over a roughly 30 day running period.

We apologize for the delay in providing this notification to DES and EPA, but it was not apparent that a noncompliance had occurred until the findings of the investigation were clarified this week. If you have any questions regarding this information, please contact Allan Palmer, PSNH Generation, at (603)634-2439.

Very truly yours,

William H. Smagula, P.E.
Director - Generation

cc: Ms. Stephanie Larson
N.H. Department of Environmental Services
Water Division
Wastewater Engineering Bureau
Permits and Compliance Section
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