



December 15, 2009

The Northeast Utilities System

D28561

U.S. Environmental Protection Agency
Region 1: New England
Office of Ecosystem Protection
NPDES Industrial Permit Branch (CIP)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Dear Sir/Madam:

Merrimack Station
NPDES Permit No. NH0001465
2009 Annual Fish Impingement Report

Public Service of New Hampshire (PSNH) submits this Annual Fish Impingement Report for the year 2008 pursuant to Part I., Section A.10.b of the Merrimack Station NPDES Permit, No. NH0001465. This permit condition requires PSNH to conduct impingement monitoring at Merrimack Station according to the provisions below.


- PSNH shall provide impingement monitoring at Merrimack Station when flows from Garvins Falls Hydroelectric Station are less than 900 cfs during any period from July 1 through October 15.
- PSNH shall collect all fish from both MK-1 and MK-2 traveling screen washes during one continuous 48-hour period per week when the conditions outlined above are met.
- PSNH shall report in writing to the New Hampshire Fish & Game Department (NHFGD), United States Fish and Wildlife Service (USFWS), New Hampshire Department of Environmental Services (NHDES) and the United States Environmental Protection Agency (USEPA) any Extraordinary Impingement Event (EIE) at Merrimack Station. An EIE is defined as an event when 50 or more fish at any one time, of any size or species, are either distressed or killed as a result of impingement.

Based on river flows at Garvins Falls Hydro, Merrimack Station was only required to collect two weekly samples from the intake screens between July 1 and October 15. No fish were collected in either sample; therefore the annual impingement rate was zero. Table 1 summarizes the sampling sessions. The volume of water reported is based on circulating pump capacities and the number of pumps operating during each screen wash cycle. Each operating unit has two pumps; the pumps servicing Unit 1 are rated at 63 cfs each (126 cfs total), the pumps servicing Unit 2 are rated at 144.5 cfs each (289 cfs total).

As demonstrated every year, the rate of fish impingement at Merrimack Station is extremely low by all industry standards even though the data is collected during worse case conditions, i.e., when river flows are less than 900 cfs. There were no extraordinary impingement events during the 2009 monitoring period.

Should you have any questions regarding this program, please contact Allan Palmer at (603) 634-2439.

Very truly yours,


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

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NH Department of Environmental Services
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US Fish and Wildlife Service
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Mr. John Magee
New Hampshire Fish and Game Department
Inland Fisheries Division
11 Hazen Drive
Concord, NH 0330

TABLE 1

Merrimack Station
 Fish Impingement Monitoring Program
2009 Schedule & Impingement Rates

48 Hour Sample Dates	Unit(s) Sampled	48 Hour Flow Through the Units	Impingement Rate	Fish Count
09/20 - 09/22	1*	21,772,800 cu. ft.	0	0
09/27 - 09/29	1*	21,772,800 cu. ft.	0	0

*Unit 2 was off-line for annual maintenance during the sampling event.

The impingement rate for 2009 was 0 fish per million cubic feet of screened water.