

**North  
Atlantic**

North Atlantic Energy Service Corporation  
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The Northeast Utilities System

November 12, 1996

NPDES Permit No. NH0020338  
NYE-96029

Mr. Carl DeLoi  
New Hampshire State Program Unit  
Environmental Protection Agency  
John F. Kennedy Building  
Boston, MA 02203

Notification of an Unusual Number  
of Herring Impinged at Seabrook Station

North Atlantic Energy Service Corporation (North Atlantic) the operator of Seabrook Station herein provides notification that an unusual number of herring were impinged at Seabrook Station during the period November 1-3, 1996. The attached fish mortality incident report is provided pursuant to Part I.A.11.g of Seabrook Station's NPDES Permit which states that the impingement of an unusual number of fish shall be reported to the Environmental Protection Agency and the New Hampshire Department of Environmental Services.

Approximately 2,000 herring were identified during the normal weekly screen wash assessment performed on November 4, 1996. The EPA<sup>1</sup> and NHDES<sup>2</sup> were notified by telephone on November 5, 1996. Courtesy notifications were also made to the New Hampshire Fish and Game Department<sup>3</sup> and the National Marine Fisheries Service, the other Seabrook Station Technical Advisory Committee (TAC) Agencies.

<sup>1</sup> Notification of an Unusual Number of Herring Impinged at Seabrook Station, Telephone Notification Between R. Sher (North Atlantic) and F. Gay (EPA) and Joy Palmer (EPA), November 5, 1996

<sup>2</sup> Notification of an Unusual Number of Herring Impinged at Seabrook Station, Telephone Notification Between R. Sher (North Atlantic) and J. Andrews (NHDES), November 5, 1996

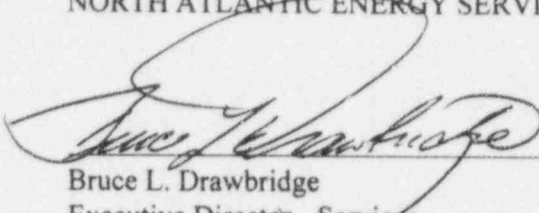
<sup>3</sup> Notification of an Unusual Number of Herring Impinged at Seabrook Station, Notification From R. Sher (North Atlantic) to B. Smith (NH Fish and Game) and Eric Hutchins (NMFS) November 5, 1996

IE23/1

Should you require additional information, please contact Mr. Ronald A. Sher, Senior Scientist at (603) 474-9521, extension 2729.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.



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**SEABROOK STATION**  
**HERRING MORTALITY INCIDENT REPORT -- NOVEMBER 1996**

The following information is reported pursuant to Part I.A.11.g of Seabrook Station's NPDES Permit:

**1. The kinds, sizes and approximate number of fish involved in the impingement incident.**

Approximately 1,540 alewife and blueback herring (10-16 cm.) and 430 Atlantic herring (13-16 cm.). These fish are all members of the herring family.

**2. The time, date and duration of the occurrence.**

The herring were impinged during a two-day period between the Friday, November 1, 1996 and Sunday, November 3, 1996 intake traveling screen washes and identified during the Monday, November 4, 1996 weekly fish impingement assessment. This number of herring is "unusual" in that it is significantly larger than the total number of herring impinged in 1995 (approximately 250).

On Tuesday, November 5, 1996, the intake traveling screens were washed again. The number of herring identified in this fish impingement assessment was significantly less (approximately 130).

**3. The operating mode of the station at the time of the occurrence.**

Seabrook Station was operating at 100 per cent power at the time of the unusual impingement occurrence.

**4. The opinion of the permittee as to the cause of the incident.**

The size range of the alewife and blueback herring impinged indicates that these were primarily young-of-the-year fish that were spawned in freshwater in the spring of 1996. Alewife and blueback herring exhibit similar migratory patterns and typically leave their native rivers and streams between June and November. The specific time of this annual out-migration appears to be triggered by heavy freshwater flows and decreasing water temperatures. The extremely heavy rains during the week of October 20 may have initiated the out-migration of these fish from the Merrimack River and Taylor River as well as other local rivers to the nearshore area where Seabrook Station's cooling water intakes are located, resulting in this impingement event. Mid-depth gill net catches by Seabrook Station's Environmental Studies Contractor, Normandeau Associates, Inc., on October 29-30, contained unusually high catches of blueback herring, indicating that these fish, and probably alewives, were present in the nearshore area.

The size range of Atlantic herring impinged indicates that these were probably young-of-the-year fish approaching one year. Atlantic herring are coastal oceanic spawners and the spawning season runs from late summer through the fall. Atlantic herring larvae and young-of-the-year are often found in the spring, summer and fall in nearshore areas or estuaries. The recent heavy rains and the resulting low estuarine salinities may have caused these fish to leave the estuaries and enter the nearshore area where they were subject to impingement by Seabrook Station.

**5. The remedial action that the permittee will undertake to prevent a recurrence of the incident.**

Immediate action was taken to conduct an additional screen wash and fish impingement assessment the next day (November 5, 1996) to determine whether the impingement was, in fact, an unusual occurrence. The number of herring identified in the subsequent fish impingement assessment was significantly less (approximately 130).

No specific remedial action is planned for this occurrence, however, North Atlantic will continue to maintain an effective fish impingement monitoring program.

cc (with Enclosure)

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