



**Public Service
of New Hampshire**

AR-195

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The Northeast Utilities System

REC'D
1/21/97

January 14, 1997

John Nelson
Chief, Marine Fisheries
New Hampshire Fish and Game Department
Region 3
37 Concord Road
Durham, NH 03824

Dear Mr. Nelson:

It has been brought to my attention that Section B.3 was omitted from the Impingement Monitoring Procedures submitted to you on December 23, 1996. Therefore, I am resubmitting another copy of the procedures that contains this section.

I apologize for any inconveniences this may have created. If you have any further questions please call me at (603) 634-2364.

Sincerely,

Richard F. Dumore
NH Environmental Services
Team Leader

Enclosure

cc: Mr. Michael Latour
Lt. Edward Cournoyer
Mr. Bruce Smith
Mr. Nicholas Prodany
Ms. Stephanie Larson

Public Service of New Hampshire Schiller Generating Station Impingement Monitoring Procedures

Purpose

This procedure is established to provide protocols for the evaluation and documentation of American lobsters (*Homarus americanus*) impinged onto the cooling water intake screens at Public Service of New Hampshire's (PSNH) Schiller Generating Station. The Impingement Monitoring Program provides specific information regarding the continued effectiveness of modifications that PSNH has implemented at Schiller Station to minimize impingement. The Program also provides an early indication of any increase in the rate of lobster impingement so that PSNH can respond in a timely manner to minimize impacts on the local lobster population.

A. Monitoring Schedule

When operating, PSNH will conduct impingement monitoring of units 3 & 4 screenwashes throughout the year. Personnel washing the screens will visually observe the screens during all washes, looking for any impinged lobsters.

Data collection and documentation on unit 3 & 4 intakes will normally be performed once per day (Monday through Friday) according to procedure A.1.

below. If the number of lobsters impinged on the screens is greater than 10, monitoring procedure A.2. below will be followed.

A.1. Normal (Low Level) Impingement Monitoring Schedule

The normal monitoring frequency conducted on Schiller Station's unit 3 & 4 intakes will be once per day, Monday through Friday. The 10 a.m. screenwash is the preferred wash; however, if this wash cannot be monitored, another screenwash conducted that day will be substituted to meet the requirements of the program. If 10 or more lobsters are found impinged on the screens during a wash, a more frequent monitoring schedule is indicated (see schedule A.2. below).

A.2. Increased (High Level) Impingement Monitoring Schedule

If during any screenwash of Unit 3 or 4 intakes, 10 or more lobsters are found impinged on either unit, operating personnel must begin to monitor and document every screenwash on both units 3 & 4 intakes for a minimum of 48 hours, including weekends (if necessary). This 48 hour period begins immediately with the first event of 10 or more impinged lobsters. If 5 or less lobsters are counted on each unit's screens during the last two successive monitoring events during this 48 hour period, the normal monitoring schedule (A.1) will resume.

If the number of impinged lobsters remains high, the increased impingement monitoring schedule will continue until the impinged lobster numbers from two successive monitoring events drops to 5 or less on each unit's intakes, then the sampling schedule will revert back to the normal frequency of once per day (see A.1.).

A.3. Operation of cross-over valve between Unit 3 and Unit 4

The cross-over valve between Unit 3 and Unit 4 intakes should normally be opened throughout the year. It is not imperative that the cross-over valve be opened; however, the benefits provided by the open valve warrant its use.

At a minimum, the cross-over valve must be opened any time the Increased Impingement Schedule (A.2.) is implemented, regardless of time of year.

B. Monitoring Procedures

Regardless of the frequency of monitoring, the following procedures will be followed when conducting impingement monitoring:

B.1. Before starting all screen washes, the operator will visually confirm that, in their best opinion, lobsters exiting the screenwash effluent pipe will drop into at least 3 feet of water. (Under most conditions this is not an issue;

however, an unusual weather pattern could result in abnormally low tides. If there is not sufficient water, follow procedure B.6. below.)

B.2. Screenwash spray nozzle pressures will be maintained at 40 psi (or less) and the rubber mat will be in place along the inside of the screen housing's back wall to prevent damaging any lobsters.

B.3. All water from the discharge of the screenwash pump(s) will be routed into the screenwash effluent discharge pipe to facilitate flushing of the pipe.

B.4. The Impingement Sampling Screen must be properly installed in the screenwash discharge trough to collect impinged lobsters.

B.5. At least one person will observe the screens as they are washed, visually checking for lobsters. Any lobsters observed will be collected to obtain the required data (see C.1. & C.2.). After data collection procedures are completed, all lobsters will be returned to the river in a sufficient volume of water (necessary to prevent injury) via the screenwash effluent discharge pipe.

B.6. The screenwash effluent discharge pipe must be in service and operating properly for all Unit 3 and 4 screenwashes. If not, the following steps will be taken:

- All impinged lobsters will be collected into 5 gallon buckets containing at least 3 gallons of river (salt) water.

Note: Fresh water (from the tap) must never be used - it will "drown" the lobsters!

- Lobsters will be promptly returned to the river, in a location where the water is at least 3 feet deep to prevent injury and predation. (A preferred location is off the northwest corner of Unit's 5 and 6 intake structure, where the Unit 4 screenwash effluent pipe normally discharges.)

C. Data Collection and Reporting Procedures

All lobsters recovered during a "monitored" screenwash will be evaluated. Data will be recorded on the Schiller Station Lobster Monitoring Log Sheets (see attachment).

C.1. General information recorded at the top of the monitoring log sheets must include the date and time of screenwash, unit monitored, number of circulators on, and name of person conducting the evaluation.

C.2. In addition, the following specific information pertaining to the lobsters must be collected: Lobsters must be identified as living or dead, their carapace length (CL) measured to the nearest mm, sex and presence of eggs (if female), crusher claw-right or left, note any missing claws, molt condition (soft or hard-shelled), and condition in general are also to be noted. Additional space has been provided if further comments are necessary.

C.3. In lieu of verbal notification of lobster impingement events at Schiller Station (as currently required in PSNH's Fish Distress Policy) NHFGD will be provided with a lobster impingement monitoring report(s) on a weekly basis.

However, if Monitoring Procedure A.2. is initiated NHFGD, Region 3 will be immediately notified.