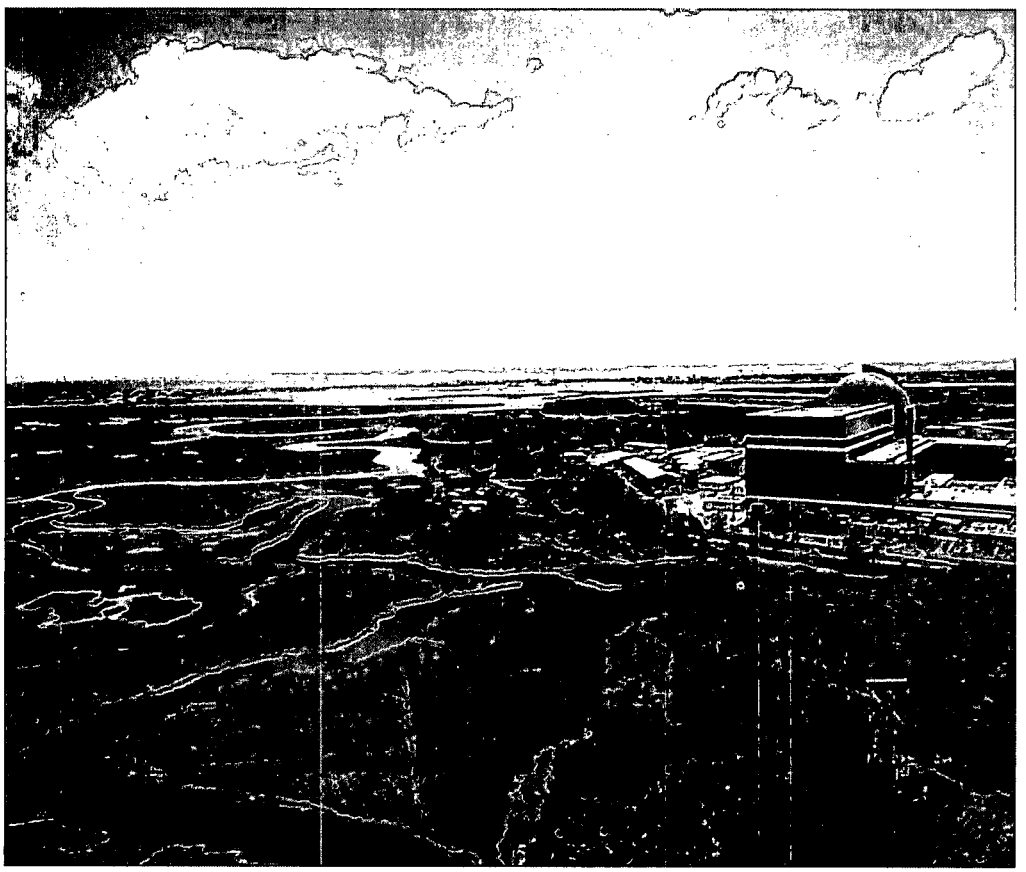
NEXTera ENERGY SEABROOK

SBK-L-10185



Attachment 3

New Hampshire Fish and Game Department

HEADQUARTERS: 11 Hazen Drive, Concord, NH 03301-6500
(603) 271-3421
FAX (603) 271-1438

www.WildNH.com
e-mail: info@wildlife.nh.gov
TDD Access: Relay NH 1-800-735-2964

RECEIVED
AUG 16 2010
M.D. O'Keefe

08/10/2010

Michael O'Keefe
Licensing Manager
Next Era Energy Seabrook
P.O. Box 300, Lafayette Road
Seabrook, NH 03874

Dear Mr. O'Keefe,

New Hampshire Fish and Game Department Marine Fisheries Division has reviewed the recently transmitted Seabrook Station, 2010 Environmental Monitoring Program Mid-Year Report. We are pleased to hear of the program's continued progress as required by NPDES Permit. It is also commendable that the program has been expanded to investigate the decline of Laminaria sp. Certainly this kelp loss has been one of only a few occurrences that may have resulted from Seabrook Station operation. We would like to have more information on two of the events covered in the report -

The estimate of over 20,000 fish impinged for the first six months of 2010 shows an alarming rise over similar impingment numbers of the previous year. We would like to have more specifics as to what fish species were involved and over what days the high numbers were caught.

Our other request for more information involves the twenty day temperature monitoring system outage: 5/24 to 6/15. We would like to see time-line detail as to when the problem was recognized and what steps were taken to correct the problem. It would also be helpful if there was information on station operation during the systems outage, pump flow rates, condensor temperatures, etc. By comparison of these data with historical records, what reasonable estimates of offshore mixing zone temperations can be made?

That concludes our comments. If there are questions on these matters, please feel free to contact me or Bruce Smith.

Sincerely,

Douglas Grout
Chief of Marine Fisheries

cc Jeff Andrews NHDES
Damien Houlihan USEPA
Mike Johnson NMFS

REGION 1
629B Main Street
Lancaster, NH 03584-3612
(603) 788-3164
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REGION 3
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NEXTera ENERGY SEABROOK

October 15, 2010

SBK-L-10175

New Hampshire Fish & Game Department
225 Main Street
Durham, NH 03824-4732

Attention: Mr. Douglas E. Grout
Chief of Marine Fisheries

Seabrook Station
Response to Comments on 2010 Environmental Monitoring Program Mid-Year Report

NextEra Energy Seabrook, LLC has enclosed responses to NH Fish & Game Department comments provided in your letter of August 10, 2010.

Should you have any further questions please contact me at 603 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC

Michael O'Keefe
Licensing Manager

Enclosure to SBK-L-10175

Response to Comments on
2010 Environmental Monitoring Program Mid-Year Report

NHFG reviewed the Seabrook Station 2010 Environmental Monitoring Program Mid-Year Report and has requested additional information regarding the relatively high impingement estimate for the first six months of 2010 and the missing data from the thermal plume monitoring program.

High Impingement Estimate

Table 1 presents the updated impingement estimates for 2010 through July. These data are based on raw field data that have not undergone quality control procedures and should be considered preliminary. The high impingement estimate for March appears to be isolated and did not continue into the following months. Through July, approximately 20,474 fish have been impinged with American sand lance (3,185), grubby (3,050), and hake sp. (3,037) the most numerous fish impinged. Approximately 77% of the total impingement estimate to date (20,474) occurred in March (15,801). The American sand lance (2,294), hake sp. (2,645), and grubby (2,537) were the most numerous fish impinged in March. Within March, 58% (9,196) of the monthly total, and 46% of the January through July total, occurred in the week of 14-20 March (Table 2). During this week, impingement samples were collected on March 15 (1,551 fish collected) and March 18 (785 fish collected).

High impingement at Seabrook Station and other power stations can be associated with high wave action. Wave height data collected at the GoMoos meteorological buoy, the closet oceanographic buoy to Seabrook Station, was used as a proxy for wave conditions at the intake. The greatest number of fish (1,551) were collected on March 14-15 when wave heights were highest (5.9 m) (Table 3). Similarly when wave heights were lowest on March 10-11, only 45 fish were collected in the sample. Based on these data and our experience in impingement collections at Seabrook Station over the years, we believe wave height is positively related to impingement counts, and the high impingement estimate in March was due to high wave action.

Thermal Plume Monitoring Data Outage

There was an outage in the collection of thermal plume monitoring data from May 24 through June 15 (Sample Periods 22-24). Attached is the Normandeau Associates internal EE/NC (Extraordinary Event/ Non Conformity) report that presents the details of the problem. When data were collected during this period, the time stamp reflected the correct date, and thus did not indicate any problem with data collection. However, when the data from this period were being processed, it was discovered that the data were duplicates of data from the previous Sample Period 21 (May 17-23). It appears that the internal clocks on the data loggers were active, but no new data were being collected. All four data loggers and the shuttle were returned to the manufacturer to determine if the data could be retrieved, but recovery of the data was not possible. New loggers and a shuttle were deployed and the previous equipment was taken out of service. Normandeau procedures have been changed to include verification by field staff that new data are being collected.

During the period of May 24 through June 15 Seabrook Station operated at 100% power with the ocean Circulating Water System and Service Water System operating normally. The maximum and average delta-T values for May and June as reported in the monthly Discharge Monitoring Reports were compliant with the effluent limits of the NPDES Permit: May maximum 40°F, May average 36°F, June maximum 35°F, June average 35°F. It can reasonably be inferred that that the ocean temperature rise effluent limit of 5°F was complied with during the months of May and June due to the absence of any abnormal operating circumstances, compliance with the in-plant delta-T effluent limits and the relatively low delta-T values during the period of data availability; 1.19°F in May and -2.13°F in June.

Table 1. Estimated impingement at Seabrook Station January through July 2010 based on preliminary field data

Species	Jan	Feb	Mar	Apr	May	June	July	TOTAL
Acadian redfish	0	0	4	0	0	0	0	4
Alewife	4	10	189	7	0	0	0	210
Alosa sp.	0	0	0	0	0	0	0	0
American eel	0	0	0	0	0	0	0	0
American lobster	0	0	0	0	0	0	0	0
American plaice	0	0	0	0	0	0	0	0
American sand lance	24	832	2293	23	8	0	4	3185
American shad	0	0	0	0	0	0	0	0
Atlantic cod	4	0	0	0	4	28	0	35
Atlantic hagfish	0	0	0	0	0	0	0	0
Atlantic herring	12	17	674	25	37	97	52	915
Atlantic mackerel	0	0	0	0	0	0	4	4
Atlantic menhaden	0	0	0	0	0	0	0	0
Atlantic moonfish	0	0	0	0	0	0	0	0
Atlantic seasnail	0	0	0	3	0	3	0	6
Atlantic silverside	46	162	400	0	0	0	0	608
Atlantic wolffish	0	0	0	0	0	0	0	0
Bigeye soldierfish	0	0	0	0	0	0	0	0
Black sea bass	0	0	0	0	7	0	1	8
Blackspotted stickleback	0	0	68	0	0	0	0	68
Blueback herring	0	3	42	0	0	3	11	59
Bluefish	0	0	0	0	0	0	0	0
Butterfish	0	0	0	0	0	0	4	4
Cunner	3	10	76	61	83	179	106	519
Flying gurnard	0	0	0	0	0	0	0	0
Four-bearded rockling	0	0	0	0	0	0	0	0
Four-spine stickleback	0	0	0	0	0	0	0	0
Fourspot flounder	0	0	0	7	4	0	0	10
Gray triggerfish	0	0	0	0	0	0	0	0
Goosefish	0	0	0	0	0	0	0	0
Gulf snailfish	0	0	7	0	0	0	0	7
Grubby	86	174	2537	56	183	13	1	3050
Haddock	0	0	0	0	0	0	0	0
Hake sp.	21	93	2645	161	72	3	41	3037
Inquiline snailfish	0	0	0	0	0	0	0	0
Largemouth bass	0	3	0	0	0	0	0	3
Longhorn sculpin	0	0	4	0	0	0	3	7
Lookdown	0	0	0	0	0	0	0	0
Lumpfish	5	111	420	0	0	3	0	539
Mummichog	0	0	0	0	0	0	0	0
Northern pipefish	0	34	700	112	0	0	0	847

SBK-L-10175

Species	Jan	Feb	Mar	Apr	May	June	July	TOTAL
Northern puffer	0	0	0	0	0	0	0	0
Northern searobin	0	0	0	0	0	0	0	0
Ocean pout	0	0	0	0	0	0	0	0
Pearlside	0	0	0	0	0	0	0	0
Pollock	0	0	4	7	11	13	27	62
Planehead filefish	0	0	0	0	0	0	0	0
Radiated shanny	0	3	119	0	0	0	0	123
Rainbow smelt	4	7	325	0	0	0	0	337
Red hake	0	0	0	0	0	0	0	0
Rock gunnel	0	10	714	268	11	36	104	1142
Scup	0	0	0	0	0	0	0	0
Sea lamprey	0	0	4	0	0	0	0	4
Sea raven	7	3	18	19	0	11	11	70
Searobin	0	0	0	0	0	0	0	0
Seasnail sp.	0	51	438	0	0	3	0	493
Sheepshead minnow	0	0	0	0	0	0	0	0
Short bigeye	0	0	0	0	0	0	0	0
Shorthorn sculpin	0	39	127	34	15	10	6	232
Silver hake	0	0	4	3	0	3	4	14
Skate sp.	0	0	0	0	0	0	0	0
Smooth flounder	0	0	0	0	0	0	0	0
Snakeblenny	0	0	0	0	0	0	0	0
Spiny dogfish	0	0	0	0	0	0	0	0
Spotted hake	0	0	0	0	0	0	0	0
Striped bass	0	0	0	0	0	0	0	0
Striped mullet	0	0	0	0	0	0	0	0
Summer flounder	0	0	0	0	0	0	0	0
Tautog	0	0	0	0	4	0	0	4
Threespine stickleback	14	439	2152	0	0	0	0	2605
Whiptail conger	0	0	0	0	0	0	0	0
White hake	0	0	0	0	0	0	0	0
White perch	0	0	0	0	0	0	0	0
Windowpane	2	51	364	49	29	7	13	515
Winter flounder	31	165	1401	44	11	0	4	1655
Wolffish	0	0	0	0	0	0	0	0
Wrymouth	0	24	70	0	0	0	0	94
Yellowtail flounder	0	0	0	0	0	0	0	0
TOTAL	263	2244	15801	880	477	414	395	20474

Table 2. Estimated weekly impingement at Seabrook Station for March 2010

Species		Mar 7-13	Mar 14-20	Mar 21-27	Mar 28-Apr 3		Total
Acadian redfish		0.0	0.0	0.0	3.6		3.6
Alewife		0.0	47.7	60.9	80.0		188.7
Alosa sp.		0.0	0.0	0.0	0.0		0.0
American eel		0.0	0.0	0.0	0.0		0.0
American lobster		0.0	0.0	0.0	0.0		0.0
American plaice		0.0	0.0	0.0	0.0		0.0
American sand lance		88.3	1895.7	120.0	189.6		2293.5
American shad		0.0	0.0	0.0	0.0		0.0
Atlantic cod		0.0	0.0	0.0	0.0		0.0
Atlantic hagfish		0.0	0.0	0.0	0.0		0.0
Atlantic herring		44.0	481.2	73.4	75.8		674.3
Atlantic mackerel		0.0	0.0	0.0	0.0		0.0
Atlantic menhaden		0.0	0.0	0.0	0.0		0.0
Atlantic moonfish		0.0	0.0	0.0	0.0		0.0
Atlantic seasnail		0.0	0.0	0.0	0.0		0.0
Atlantic silverside		14.7	342.0	43.1	0.0		399.9
Atlantic wolffish		0.0	0.0	0.0	0.0		0.0
Bigeye soldierfish		0.0	0.0	0.0	0.0		0.0
Black sea bass		0.0	0.0	0.0	0.0		0.0
Blackspotted stickleback		0.0	0.0	0.0	68.4		68.4
Blueback herring		7.6	3.7	0.0	30.5		41.7
Bluefish		0.0	0.0	0.0	0.0		0.0
Butterfish		0.0	0.0	0.0	0.0		0.0
Cunner		3.6	22.4	35.1	15.0		76.2
Flying gurnard		0.0	0.0	0.0	0.0		0.0
Four-bearded rockling		0.0	0.0	0.0	0.0		0.0
Four-spine stickleback		0.0	0.0	0.0	0.0		0.0
Fourspot flounder		0.0	0.0	0.0	0.0		0.0
Gray triggerfish		0.0	0.0	0.0	0.0		0.0
Goosefish		0.0	0.0	0.0	0.0		0.0
Gulf snailfish		7.3	0.0	0.0	0.0		7.3
Grubby		311.8	182.5	1891.5	151.3		2537.1
Haddock		0.0	0.0	0.0	0.0		0.0
Hake sp.		43.7	1942.0	308.3	350.9		2644.9
Inquiline snailfish		0.0	0.0	0.0	0.0		0.0
Largemouth bass		0.0	0.0	0.0	0.0		0.0
Longhorn sculpin		3.6	0.0	0.0	0.0		3.6
Lookdown		0.0	0.0	0.0	0.0		0.0
Lumpfish		7.3	270.5	104.5	37.9		420.2
Mummichog		0.0	0.0	0.0	0.0		0.0
Northern pipefish		18.3	194.4	137.7	350.0		700.5

Species		Mar 7-13	Mar 14-20	Mar 21-27	Mar 28-Apr 3		Total
Northern puffer		0.0	0.0	0.0	0.0		0.0
Northern searobin		0.0	0.0	0.0	0.0		0.0
Ocean pout		0.0	0.0	0.0	0.0		0.0
Pearlside		0.0	0.0	0.0	0.0		0.0
Pollock		0.0	4.1	0.0	0.0		4.1
Planehead filefish		0.0	0.0	0.0	0.0		0.0
Radiated shanny		3.6	18.8	81.9	14.8		119.1
Rainbow smelt		0.0	314.3	0.0	11.0		325.3
Red hake		0.0	0.0	0.0	0.0		0.0
Rock gunnel		18.3	11.4	524.0	159.8		713.6
Scup		0.0	0.0	0.0	0.0		0.0
Sea lamprey		0.0	4.1	0.0	0.0		4.1
Sea raven		0.0	7.7	3.2	7.4		18.4
Searobin		0.0	0.0	0.0	0.0		0.0
Seasnail sp.		84.6	49.3	293.7	10.8		438.4
Sheepshead minnow		0.0	0.0	0.0	0.0		0.0
Short bigeye		0.0	0.0	0.0	0.0		0.0
Shorthorn sculpin		55.4	3.7	64.6	3.8		127.4
Silver hake		0.0	0.0	0.0	3.8		3.8
Skate sp.		0.0	0.0	0.0	0.0		0.0
Smooth flounder		0.0	0.0	0.0	0.0		0.0
Snakeblenny		0.0	0.0	0.0	0.0		0.0
Spiny dogfish		0.0	0.0	0.0	0.0		0.0
Spotted hake		0.0	0.0	0.0	0.0		0.0
Striped bass		0.0	0.0	0.0	0.0		0.0
Striped mullet		0.0	0.0	0.0	0.0		0.0
Summer flounder		0.0	0.0	0.0	0.0		0.0
Tautog		0.0	0.0	0.0	0.0		0.0
Threespine stickleback		80.4	1961.3	42.7	67.5		2151.9
Whiptail conger		0.0	0.0	0.0	0.0		0.0
White hake		0.0	0.0	0.0	0.0		0.0
White perch		0.0	0.0	0.0	0.0		0.0
Windowpane		29.3	271.0	21.6	41.9		363.7
Winter flounder		47.5	1120.3	98.2	135.2		1401.2
Wolffish		0.0	0.0	0.0	0.0		0.0
Wrymouth		3.8	47.7	0.0	18.8		70.3
Yellowtail flounder		0.0	0.0	0.0	0.0		0.0
Unidentifiable		0.0	0.0	0.0	0.0		0.0
TOTAL		873.0	9195.8	3904.4	1827.9		15801.1

Table 3. Wave Height at the GoMoos buoy and Number of Fish Collected in Impingement Samples in March at Seabrook Station

Collection Period	Wave height (m)	Predominant Surface Current	No. of Fish Collected in Sample	Weekly Impingement Estimate
March 7-8	0.72	SW	193	
March 10-11	0.36	SE-SW	45	873 (Week 1)
March 14-15	5.45	SW	1,551	
March 17-18	1.93	SE-SW	785	9,196 (Week 2)
March 21-22	0.68	SW-SSW	189	
March 24-25	1.42	S-SSW	987	3,904 (Week 3)
March 28-29	1.65	S-SSW	129	
March 31-Apr 1	2.26	S-SSW	358	1,828 (Week 4)
Total	1.8 (ave.)		4,237	15,801

EXTRAORDINARY EVENT/NONCONFORMITY REPORT

EE/NC Report Number: 09- TEM061510

Project Name: Seabrook – Off shore continuous temperature monitoring

Code: 21900.004

Date: 06-23-10

Originator: Name: Chris Baker

Problem: A faulty shuttle shorted out all four continuous monitoring loggers at stations DS and T7 for the dates 05/24/10 through 06/15/10 (sample periods 22, 23, and 24). Attempts to retrieve data were unsuccessful. In the field, the loggers appeared to download properly and when viewed in Hoboware showed the correct recorded dates, but the data was a copy of the temperatures from the previous week, no new data was recorded.

Mark data as void. The shuttle and loggers are being sent back to the manufacturer for analysis and repair. Four new loggers have been deployed in the field and a new shuttle is in service. Loggers 863 & 864 were deployed at station DS and loggers 862 & 867 were deployed at station T7 on 6-15-10.

Recommendation:

In the future, when viewing downloaded temperature data, the previous sample period should also be opened to make sure the shuttle has correctly downloaded the loggers for the week.

Signature: Chris Baker Date: 6-23-10

Project Manager: Name: Paul Geoghegan

Loggers and shuttle were sent to the manufacturer and they were not able to recover data. New equipment has been deployed. From now on, verify that data are not copies of the previous download.

Signature: Paul Geoghegan Date: 6/25/2010

Quality Assurance: Name: Robert Hasevlat

Response: Proceed with PM's instructions regarding data verification. Edit Field SOP to reflect new verification process. Document instructions to field crew.

Signature: Robert C Hasevlat Date: 06-25-10

Project Manager: Name: Paul Geoghegan

Report Filed: EENC closed and placed in P:\Bedford Projects\Projects\21900 2010 Seabrook\EENC\Closed EENCs. Hasevlat and Baker notified 6/25/10

Signature: _____ Date: 6/25/10

Distribution List of Copies: _____

2

North Atlantic

North Atlantic Energy Service Corporation
P.O. Box 300
Seabrook, NH 03874
(603) 474-9521

The Northeast Utilities System

March 20, 1996
NPDES Permit No. NH0020338
NYE-97010

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

Temporary Suspension of
Seabrook Station Gill Net Monitoring Program

This letter documents the fact that North Atlantic Energy Service Corporation (North Atlantic) temporarily suspended the Seabrook Station Gill Net Monitoring Program on March 19, 1997, as directed by the Environmental Protection Agency (EPA)[1]. This action was necessitated by the fact that a dead harbor porpoise was discovered on February 18, 1997 in the farfield gill net (Station G1) which was deployed as part of Seabrook Station's Environmental Studies Program. The harbor porpoise was approximately three feet long and appeared to be in good condition. North Atlantic was informed of this occurrence by the firm conducting the program on March 11, 1997, and notified the National Marine Fisheries Service (NMFS) on that same day[2].

The Gill Net Monitoring Program shall be considered temporarily suspended pending final approval of the Seabrook Station Long-Term Environmental Studies Program Proposals,[3] previously submitted, in which North Atlantic requested that the Gill Net Program be terminated.

If you have additional questions, please contact Mr. Terry L. Harpster, Director of Licensing Services, at (603) 773-7765.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.

Ted C. Feigenbaum
Executive Vice President
and Chief Nuclear Officer

---

1 Discussion Regarding the Temporary Suspension of the Seabrook Station Gill Net Monitoring Program, Telephone Conversation Between F. Gay (EPA), J. Hart (North Atlantic), and R. Sher (North Atlantic) on March 18, 1997

2 Notification of a Harbor Porpoise Taken by a Seabrook Station Monitoring Program Gill Net, Telephone Conversation Between R. Sher (North Atlantic) and D. Morris (NMFS)

3 North Atlantic Letter NYE-96021, dated August 29, 1996, "Seabrook Station Long-Term Environmental Studies Program Proposals," B. Drawbridge (North Atlantic) to C. DeLoi (EPA)

3

cc (with Enclosure)

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