

## SeabrookNPEM Resource

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**From:** Wentzel, Michael  
**Sent:** Monday, November 01, 2010 12:26 PM  
**To:** Cliche, Richard; Carley, Edward  
**Cc:** OKeefe, Michael  
**Subject:** Request for Information re: Seabrook Station LRA Environmental Review  
**Attachments:** Seabrook LRA Environmental RAIs.pdf

Gentlemen,

Attached, please find a request for additional information related to the Seabrook Station LRA Environmental Report. Your response is requested within 30 days. If you cannot respond within the requested timeframe, or require additional clarification as to what is being requested, please feel free to contact me.

Thanks,  
Mike

Michael Wentzel  
Project Manager  
U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation, DLR/RPB1  
Mailstop O-11F1  
Washington, DC 20555  
301-415-6459  
[michael.wentzel@nrc.gov](mailto:michael.wentzel@nrc.gov)

**Hearing Identifier:** Seabrook\_License\_Renewal\_NonPublic  
**Email Number:** 43

**Mail Envelope Properties** (Michael.Wentzel@nrc.gov20101101122500)

**Subject:** Request for Information re: Seabrook Station LRA Environmental Review  
**Sent Date:** 11/1/2010 12:25:38 PM  
**Received Date:** 11/1/2010 12:25:00 PM  
**From:** Wentzel, Michael

**Created By:** Michael.Wentzel@nrc.gov

**Recipients:**

"OKeefe, Michael" <Michael.OKeefe@fpl.com>  
Tracking Status: None  
"Cliche, Richard" <Richard.Cliche@fpl.com>  
Tracking Status: None  
"Carley, Edward" <Edward.Carley@fpl.com>  
Tracking Status: None

**Post Office:**

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

October 29, 2010

Mr. Paul Freeman  
Site Vice President  
c/o Mr. Michael O'Keefe  
NextEra Energy Seabrook, LLC  
P.O. Box 300  
Seabrook, NH 03874

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
SEABROOK STATION LICENSE RENEWAL APPLICATION ENVIRONMENTAL  
REVIEW (TAC NO. ME3959)

Dear Mr. Freeman:

By letter dated May 25, 2010, NextEra Energy Seabrook, LLC (NextEra) submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54), to renew Operating License NPF-86 for Seabrook Station, Unit 1 (Seabrook) for review by the U.S. Nuclear Regulatory Commission (NRC). The NRC is reviewing the information contained in the license renewal application and the associated Environmental Report. The staff has identified, in enclosure 1, areas where additional information is needed to complete the review. Enclosure 2 identifies certain documents reviewed during the October 5-7, 2010, site audit that the NRC request be submitted by NextEra for further review. Additional requests for additional information may be issued in the future.

As discussed with your staff, we request that you provide your responses no later than 30 days after the issuance of this letter. If you have any questions, please contact me at 301-415-6459 or by e-mail at [michael.wentzel@nrc.gov](mailto:michael.wentzel@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Wentzel".

Michael Wentzel, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosures:  
As stated

cc w/encl: Distribution via Listserv

**Request for Additional Information  
For Seabrook Station License Renewal  
Environmental Review**

**Meteorology and Air Quality**

1. Please provide the annual air emission reports for Title V permitted sources (TV-OP-017 and GSP-EG-225), including fuel consumption per year, for the five most recent years.

**Aquatic Ecology**

1. In the "Seabrook 2009 Environmental Monitoring in the Hampton–Seabrook Area: A Characterization of Environmental Conditions" (NAI 2010), Table 4-1 "Species Composition, Annual Totals, and Nine-Year Total of Finfish, and American Lobster Impinged at Seabrook Station from 1994 to 2009," it provides impingement estimates from 1994 through 2009. Subnote "a" states that impingement data prior to October 1994 were underestimated. Please provide a brief explanation why these data were underestimated.
2. In NAI 2010, Table 4-6 "Annual estimated numbers of fish eggs and larvae entrained (in millions) by the cooling water system at Seabrook Station from June 1990 through December 2009" it provides entrainment estimates for several species of fish eggs and larvae. For egg entrainment estimates, several categories combine two or more species (e.g. Atlantic cod/haddock, cunner/yellowtail, hake spp., hake spp./fourbeard rocking) due to the similar appearance of the eggs and spawning seasons. Provide any supporting information available to estimate the percentage of eggs that belong to each species.
3. In NAI 2010, NextEra sampled in two main areas, the nearfield and farfield sites. The nearfield site is located near the intake and discharge structures, and the farfield site is located approximately 2-3 nautical miles from these structures. NextEra compares data from the two sites to determine whether plant operations have an impact on aquatic resources. Discuss the justification why the farfield site was selected. Describe any studies that were conducted to select the farfield site as a control site.
4. Please describe the cleaning and maintenance procedures for the intake and discharge structures, including the frequency of dredging, physical cleaning, and other maintenance procedures.
5. Please specify the flow rate at the intake structures.
6. Please provide any recent correspondence from Federal or State agencies regarding NAI 2010 or "Seabrook Station, 2010 Environmental Monitoring Program Mid-Year Report" and NextEra's responses to those comments.

7. The Environmental Report (ER) states that NextEra stopped monitoring pelagic fish using gill nets because the sampling methods had detrimental impacts on aquatic resources. Please provide documentation from National Marine Fisheries Service (NMFS) or other Federal or State agencies that suggested NextEra discontinue this monitoring program.

### **Human Health**

1. The Environmental Report (ER), Section 3.1.3.3, Solid Radioactive Waste System, discusses how low-level radioactive waste is expected to be handled during the period of license renewal. However, as discussed in the ER, Seabrook Station cannot dispose of Class B and C low-level radioactive waste at the Barnwell, SC facility, as New Hampshire is not a part of the Atlantic Interstate Low-Level Radioactive Waste Management Compact. The ER states that Seabrook Station has sufficient capacity within the waste processing building for approximately seven years of storage for Class B and C waste. In addition to the storage capability, the ER discussed the use of a contractor to process and take title of the Class B and C waste for its disposal. However, based on the information contained in the ER, the staff is unable to reach a conclusion regarding Seabrook Station's capacity to store and dispose of low-level radioactive waste over the term of license renewal. Please provide additional information about Seabrook Station's typical yearly low-level waste generation rates, processing methods, storage capability, and disposal options during the period of license renewal.
2. The ER, Section 3.1.3.4, Mixed Waste, discusses an outage event where a large volume (40 tons) of mixed waste was generated during a steam generator chemical cleaning process and that similar large volumes may be generated in the future. Is it reasonably foreseeable that there will be additional steam generator chemical cleanings that will require the disposal of similar large volumes of mixed waste during the term of license renewal? Also, the discussion on the generation of "small volumes of mixed waste" does not contain sufficient information for the staff to make an assessment of the mixed waste storage and disposal capabilities at the Seabrook Station. Please provide additional information about Seabrook's typical yearly mixed waste generation rates, processing methods, applicable permits, storage capacity, and disposal options during the period of license renewal.

### **Archaeological and Cultural Resources**

1. Please provide any correspondence with the New Hampshire Division of Historical Resources or Native American tribes since submitting the ER.

### **Hydrology and Water Quality**

1. Please provide a summary of the last 12 months of analytical results of composite samples taken via the Radiation Monitor Control Station (located in the Auxiliary Building).

2. Has tritium been detected in any of the new temporary monitoring wells (TW-1, TW-2, or TW-3) installed in the marsh south of the Auxiliary Building? If so, please identify the well(s), date(s) detected, and maximum observed results.

**Socioeconomics**

1. For the last three years, please provide: visitor center attendance data, emergency preparedness fees, mill rates and education taxes, and tax appraisal value of Seabrook Station.

**References Requested for Docketing at the  
Seabrook Station Environmental Site Audit**

October 5-7, 2010

<b>Meteorology and Air Quality</b>
A. Seabrook Station, Design Basis Document, Meteorological Monitoring System, DBD-MET-01, Revision 2, January 7, 2010.
B. FPL Company – New England Division, 345 kV Seabrook Transmission Substation SF6 Emissions Reduction Partnership for Electric Power Systems, Annual Reports for 2005-2009.
C. NHDES, Stage I/II Gasoline Vapor Recovery System, Certificate of Compliance, March 20, 2008.
D. NHDES, Title V Operating Permit, TV-OP-017, Issued June 5, 2006.
E. NHDES, Issuance of General State Permit: GSP-EG-225, Issued July 2, 2008.
F. Letter of Deficiency for the Title V air permit issued by New Hampshire Department of Environmental Services in 2010 and any subsequent related correspondence.
<b>Aquatic Ecology</b>
A. ARCADIS et. al. (ARCADIS, Normandeau Associates Inc., Wayne C. Micheletti, Inc., and Harris Group, Inc.). 2008. Cooling Water Intake Structure information Document. Prepared for FPL Energy Seabrook, LLC. July 2008. (Note that Appendix F is privileged and confidential. If the NextEra feels it is appropriate, you can request that this appendix be non-public by filling out an affidavit under 10 CFR 2.390.)
B. Florida Power and Light (FPL). 2006. Seabrook Station NPDES Permit NH0020338 Renewal Application. September 2006. (Please include cover letter and Clean Water Act Section 316(a) and (b) certifications.)
C. NAI (Normandeau Associates, Inc.). 1988. Seabrook Environmental Studies, 1987. A Characterization of Baseline in the Hampton-Seabrook Area, 1975-1987. A preoperational study for Seabrook Station Technical Report XIX-II. Prepared for NH Yankee Division Public Service Company of New Hampshire. November 1988.
D. NAI (Normandeau Associates Inc.). 1991. Seabrook Station 1990 Environmental Studies in the Hampton – Seabrook Area: A Characterization of Environmental Conditions.
E. NAI (Normandeau Associates Inc.). 1994. Seabrook Station 1993 Environmental Studies in the Hampton – Seabrook Area: A Characterization of Environmental Conditions. Prepared for North Atlantic Energy Service Corporation.
F. NAI (Normandeau Associates Inc.). 1995. Seabrook Station 1994 Environmental Monitoring in the Hampton – Seabrook Area: A Characterization of Environmental Conditions. Prepared for North Atlantic Energy Service Corporation.
G. NAI (Normandeau Associates, Inc.). 1997. Seabrook Station 1996 Environmental Monitoring in the Hampton–Seabrook Area: A Characterization of Environmental Conditions.
H. NAI (Normandeau Associates Inc.). 2001. Seabrook Station Essential Fish Habitat Assessment. R-18900.009. Prepared for North Atlantic Energy Service Corporation.
I. NAI (Normandeau Associates, Inc.). 2008. Seabrook Station 2007 Environmental Monitoring in the Hampton–Seabrook Area: A Characterization of Environmental Conditions. Prepared for FPL Energy Seabrook Station.

J. NAI (Normandeau Associates, Inc.). 2010. Seabrook Station 2009 Environmental Monitoring in the Hampton–Seabrook Area: A Characterization of Environmental Conditions. Prepared for FPL Energy Seabrook Station.
K. NAI (Normandeau Associates, Inc.). 2010. Seabrook Station 2010 Environmental Monitoring Program Mid-Year Report.
L. NAI and ARCADIS. (Normandeau Associates, Inc. and ARCADIS). 2008. Seabrook Nuclear Power Station EPA 316(b) Phase II Rule Project, Revised Proposal for Information Collection. Section 7.0. Prepared for FPL Energy Seabrook Station. June 2008.
M. NAI (Normandeau Associates, Inc.) and BBL (Blasland Bouck and Lee). 2006. Seabrook Nuclear Power Station EPA 316(b) Phase II Rule Project Proposal for Information Collection. Prepared for FPL Energy Seabrook Station. Bedford, New Hampshire, Normandeau Associates. May 2006. (Please also include associated letter to EPA dated May 4, 2006.)
N. NMFS (National Marine Fisheries Service). 2004. Letter From L. Allen, Office of Protected Resources to A. Legendre, FPL Energy Seabrook Station Regarding Withdrawal of Application for Incidental Take Authorization. May 7, 2004.
O. Padmanabhan M and Hecker GE. 1991. Comparative evaluation of hydraulic model and field thermal plume data Seabrook Nuclear Station. Alden Research Laboratory, Inc. Sponsored by New Hampshire Yankee Division of Public Service Company of New Hampshire.
P. Seabrook Station. 2010. Bivalve Larvae Entrainment Sampling. ZN1120.02, Rev.00, Chg. 03. Regulatory Compliance Procedure.
Q. Seabrook Station. 2010. Ichthyoplankton Entrainment Sampling. ZN1120.01, Rev.01, Chg. 03. Regulatory Compliance Procedure.
<b>Hydrology</b>
A. Seabrook, 2010, Environmental Reclamation of 32 Acres behind General Office Building, Rev. 1, March 23
B. Radiation Safety & Control Services, Inc. (RSCS), 2009a, Site Conceptual Ground Water Model for Seabrook Station, Rev. 01, TSD #09-019, June 9
C. Radiation Safety & Control Services, Inc. (RSCS), 2009b, Tritium Distribution and Ground Water Flow at Seabrook Station, Rev. 00, TSD #09-039, August 31
D. NextEra Energy Seabrook, LLC, 2009, Stormwater Pollution Prevention Plan for NextEra Energy Seabrook, Rev. 41, July 1
E. NHDES, 2010, NPDES Compliance Evaluation Inspection for NPDES Permit No. NH0020338, letter from P. Heitzler, Wastewater Engineering Bureau, to A. Legendre, NextEra Energy Seabrook LLC, July 20
F. NHDES, 2010, NPDES Compliance Evaluation Inspection for NPDES Permit No. NH0020338, letter from P. Heitzler, Wastewater Engineering Bureau, to A. Legendre, NextEra Energy Seabrook LLC, June 15
G. NextEra Energy Seabrook, 2010, Response to Letter of Deficiency – NPDES Compliance Evaluation Inspection, letter from M. O’Keefe, Licensing Manager, to State of New Hampshire, Department of Environmental Services, July 15
H. Well completion data and elevation data for wells TW-1, TW-2, and TW-3 and the recent SW- series wells (circa 2009 and 2010)
I. Current illustrations of tritium data (plume) and groundwater elevation contours in surficial and bedrock aquifers, September 2010 (prepared by RSCS)
J. USEPA letter regarding timely and complete NPDES permit renewal application (circa 2006)



K. Discharge Monitoring Reports for the last 12 months, as submitted to the U.S. EPA per NPDES Permit #NH101303
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<b>Archaeological and Cultural Resources</b>
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A. Seabrook Station Program Manual, Environmental Compliance Manual, Rev. 41 (NAEC) excluding appendices
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B. Cultural Resources Protection Plan Draft and Final, when available
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C. Cultural Resources Management Plan, Seabrook Nuclear Power Plant, Seabrook and Hampton Falls, New Hampshire, May 2010 by Brian Valimont, New England Archaeology Co., LLC
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October 29, 2010

Mr. Paul Freeman  
Site Vice President  
c/o Mr. Michael O'Keefe  
NextEra Energy Seabrook, LLC  
P.O. Box 300  
Seabrook, NH 03874

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
SEABROOK STATION LICENSE RENEWAL APPLICATION ENVIRONMENTAL  
REVIEW (TAC NO. ME3959)

Dear Mr. Freeman:

By letter dated May 25, 2010, NextEra Energy Seabrook, LLC (NextEra) submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54), to renew Operating License NPF-86 for Seabrook Station, Unit 1 (Seabrook) for review by the U.S. Nuclear Regulatory Commission (NRC). The NRC is reviewing the information contained in the license renewal application and the associated Environmental Report. The staff has identified, in enclosure 1, areas where additional information is needed to complete the review. Enclosure 2 identifies certain documents reviewed during the October 5-7, 2010, site audit that the NRC request be submitted by NextEra for further review. Additional requests for additional information may be issued in the future.

As discussed with your staff, we request that you provide your responses no later than 30 days after the issuance of this letter. If you have any questions, please contact me at 301-415-6459 or by e-mail at [michael.wentzel@nrc.gov](mailto:michael.wentzel@nrc.gov).

Sincerely,  
*/RA/*  
Michael Wentzel, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosures:  
As stated

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ADAMS Accession No.: ML102861217

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NAME	IKing	JSusco	MSPencer	Almboden	BPham	MWentzel
DATE	10/20/10	10/22/10	10/28/10	10/29/10	10/29/10	10/29/10

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Letter to Paul Freeman from Michael Wentzel dated October 29, 2010

**SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE SEABROOK STATION LICENSE RENEWAL APPLICATION ENVIRONMENTAL REVIEW (TAC NO. ME3959)**

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Ronald Kolpa (rkolpa@anl.gov)