

# UNITED STATES NUCLEAR REGULATORY COMMISSION REGION I

2100 RENAISSANCE BOULEVARD, SUITE 100 KING OF PRUSSIA, PENNSYLVANIA 19406-2713

January 4, 2013

LICENSEE: NextEra Energy Seabrook, LLC (NextEra)

FACILITY: Seabrook Station, Unit 1 (Seabrook)

SUBJECT: SUMMARY OF MEETING REGARDING STATUS OF DEGRADED CONCRETE

HELD ON DECEMBER 11, 2012

On December 11, 2012, the U.S. Nuclear Regulatory Commission (NRC) conducted an open house, followed by a public meeting, at the One Liberty Lane Conference Center in Hampton, NH. The NRC conducted the open house and public meeting to discuss the safety implications and status of its review of NextEra's commitment actions related to the Alkali-Silica Reaction (ASR) conditions in safety-related structures at Seabrook Station. The commitments are documented in a May 16, 2012, Confirmatory Action Letter (CAL) No. 2012-002 (ADAMS Accession No. ML12125A172).

A notice of the open house and public meeting was issued on November 19, 2012, and was posted on the NRC's external (public) web page (ADAMS Accession No. ML12324A218). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

The NRC presented poster boards during the open house and answered questions from individuals. Following the open house, the NRC presented slides during the public meeting to discuss the results of its first CAL follow-up inspection related to the adequacy of NextEra's actions to address the impact of ASR on reinforced concrete structures, as documented in Inspection Report No. 05000443/2012009 (ADAMS Accession No. ML12338A283). The NRC slides presented (ADAMS Accession No. ML12356A043) included a description of the ASR process, virtual tour of the plant, safety implications, inspection results to date, and future inspection activities.

Members of the public, local officials, state officials, and members of the media attended the meeting and were offered the opportunity to question the NRC regarding NextEra's commitments and the safety implications related to Seabrook. There were no "take-away" actions from this meeting for the NRC staff.

James M. Trapp, Chief Engineering Branch 1 Division of Reactor Safety

#### Enclosures:

1) List of Attendees

2) CAL Response Status

3) List of References

cc w/encl: Distribution via ListServ

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/RA/

James M. Trapp, Chief Engineering Branch 1 Division of Reactor Safety

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DOC NAME: G:\DRS\Seabrook Concrete\Media-Pub\For ShPt Pub Mtg 12-2012\Meeting Summary\SB Meeting Summary 12-11-2012.docx

ADAMS Accession No.: ML13004A178

☐ SUNSI Review		☑ Non-Sens □ Sensitive		☑ Publicly Available □ Non-Publicly Available	
OFFICE	*RI/DRS	*RI/DRS	RI/DRP	RI/DRS	
NAME	NFioyd*	RConte	DSchroeder	JTrapp/RC	
DATE	12/21/12	12/27/12	1/3/13	1/4/13	

<sup>\*</sup> see previous concurrence

Distribution w/encl: (via E-mail)

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RidsNrrPMSeabrookResource

RidsNrrDorlLpl1-2 Resource



# SEABROOK STATION ASR PUBLIC MEETING DECEMBER 12, 2012 ATTENDANCE LIST

Attendee	Organization	
Bruce skup	no more Furushima	
Rick Nuble	Nextera	
Julie LeBeau	Nextera	
Chris Pord	C-10	
HERB MoyER	S. A.P.L.	
Christian O'Rourk	Union of Concerned Scientist	
Joan Laily	No. M. Fu!	
Sam Bong	w * *	
Ten Bulu	SANZ	

Attendee	<b>Organ</b> ization
DON TILBURY	to and the first the second and the
James Metcelf	
Alan Smith	
Victor Azzi	
Darvin Kapitz	
MARK BTRUM	
Ted Messia	
Hormster Horres	
Dudley Shep and	
John Grancusott MEMA	MEMA
Nis. Kedal Next Era	Nextera

Attendee	Organization
Jim Kay	
Gamy Pud	scienteel
LEO LESSARD	AREVA
JOE RAYAPPU	ALEVA
Susan Hanan	AREVA
abert Banson	ARENA
Mulh	Areva
Tony Cerne	5014
Edward Cale	Nexteen 6
Dong Bogen	SAPC
Karon Kelly-Alge	r Cifizar-no org- affiliation

Attendee	Organization
PAUL WILLOUGHBY	NEXT FRA ENERGY SERROY
ILSE ANDREWS	SAPL
angelien Chearamide	SAPL Darly News of New House not
Sandra Gavatis	<b>'</b>
Diane Becker	NH HSEM
Rick Chate	Nextera
PAUD GRESS	SELF
Linda Cooper	SUF
Elaine Andrews	House of Rep. Self Dutyil
MICHAEL OSSING	New Era
Marcen Meagher	Newton

Attendee	Organization
Tim Didson	
Dan CHASE.	Curtaes Wright
FRED ANGERSON	SELF
Alex Curley	Self
WALT SIELRY	SelF
Tom Vehec	NEYTERN Subuh
Tom Warehour	Nameta Serbash
James Connolly	Next Era Energy Scabrook
CATHY WOLFF	5.0/2
Douglas Pholips	ACUMEN
DARIN Swimm	CONSIDER MAN JOHN

Attendee	Organization	
JERRY KOTKOWSICI	NEXTELL ENELLY CITIZEN OF HAMPTON	-
Andrew thodadan		
Ari Herrog	Newburgport City Council	
Ed Cameron	NEWBURTPORT CITY Council	
MIKE WELSH	RESIDENT	
John Welst	mesiden k	
Robert Kaplan	·	
Jacob DeWille	MIT	
Caroline Cochan	MIT	
Nathan Antrevs	MIT	



## SEABROOK STATION ASR PUBLIC MEETING DECEMBER 12, 2012 ATTENDANCE LIST

Attendee	Organization	
HERB MOYER	S.A.P.L.	
Dune Beeker	NHSEM	
Mi S. Kodal	AuxtEra	
Carocynfolmon	C-10	
Lathy Paymie	C-10	
Collie Nelson	2-10	
Cara Osban	Jenater Shicheen's	
Peter T. Tutinas	Next Era Seabrule	
Kathleen O. Connor Ives	Massachusetts State Senate First Essex	
	District	

Attendee	Organization	· .
TOM HENSEY	LASONERS LOCAL 976	
SHIR HABBERMAL	Paris Herad	
Rep Renny Cushing	M. of ctorse of Representation	·
Mary McCurty		
REP. Mikie Costelle	SMIE HOUST	
Reportie Cali-1th	State Husp NH	
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## ENCLOSURE 2 CAL Response Status 12/3/12

STATUS	Sub-LEAD	OTHER	LICENSEE DOC.	CAL ITEM
CL RPT 1	EB1	Lic. Compl.	AR 581434 Rev. 2 uploaded to internal file 5/23/12	1. Revise the prompt operability determination (POD) associated with AR581434, 'Reduced Concrete Properties Below Grade in "B" Electrical Tunnel Exterior Wall,' by May 25, 2012. NextEra Energy Seabrook will notify the site NRC Resident Inspector upon completion of this action.
CL/OP RPT1	EB1	Licensee Planning to Revise	Ltr 5/24/12 – ADAMs Accession No. ML12151A396 Ltr & Encl. 1	2. Submit the root cause for the organizational causes associated with the occurrence of ASR at Seabrook Station and related corrective actions by May 25, 2012.
CL RPT1	DE/DLR	Lic. Compl.	Ltr 5/24/12 – ADAMs Accession No. ML12151A397 Encl. 2	3. Submit the evaluation, "Impact of ASR on Concrete Structures and Attachments," (Foreign Print 100716) by May 25, 2012.
Under NRC Review RPT2	DE/DLR	Lic. Compl.	Ltr 6/8/12 – ADAMS Accession No. ML12171A277	4 Submit the corrective action plan for the continued assessment of ASR in concrete structures at Seabrook Station including development of remedial actions to mitigate the affects of ASR, where warranted, by June 8, 2012.
CL RPT1	EB1	Lic. Compl.	AR 01664399/AR 1757861 Rev. 2 uploaded to internal file 6/25/12	5. Revise the POD associated with AR1664399, 'Reduced Concrete Modulus of Elasticity Below Grade in Containment Enclosure Building, RHR Equipment Vaults, EFW Pump House, and Diesel Generator Fuel Oil Storage Rooms,' by June 30, 2012. The expanded scope buildings will be included in this POD. NextEra Energy Seabrook will notify the site NRC Resident Inspector upon completion of this action.
CL RPT 1	EB1	Lic. Compl.	6/29/12 FP 100734 uploaded to internal file.	6. Complete short term aggregate expansion testing (ASTM C 1260 Mortar Bar Expansion Test) by June 30, 2012. Results will be available for NRC review approximately 30 days after testing is complete.
Due June 2013 RPT 2	EB1	Licensee Planning to Revise	NextEra discussed planned changes with inspection staff — Letter Revision, TBD	7. Complete long term aggregate expansion testing (ASTM C 1293 Concrete Prism Test) by June 30, 2013. Results will be available for NRC review approximately 30 days after testing is complete.

STATUS	BRANCH LEAD	OTHER	LICENSEE DOC.	CAL ITEM
Under NRC Review	DE/DLR	Lic. Compl.	Ltr 6/21/12 – ADAMS Accession No. ML12179A281 and Encl. ML 12179A282	8. Submit the technical details of the testing planned at the contracted research and development facility by June 30, 2012.
Under NRC Review	DLR issuing AMP questions related to this area by end of Aug 2012	Lic. Compl.	7/16/12 EDS 36180 uploaded to internal file.	9. Update the Maintenance Rule Structures Monitoring Program to include monitoring requirements for selected locations in areas that exhibit ASR by July 15, 2012. NextEra Energy Seabrook will notify the site NRC Resident Inspector upon completion of this action.
Under NRC Review	EB1	Lic. Compl.	7/16/12 FP 100738 uploaded to internal file.	10. Perform the initial six-month interval crack measurements and crack indexing at 20 locations in areas that exhibit the highest crack indices by July 15, 2012. Crack measurement will be performed at six-month intervals until a reliable trend of ASR progression is established. NextEra Energy Seabrook will notify the site NRC Resident Inspector upon completion of this action.
Due Dec. 2012 RPT 2	EB1	Licensee Planning to Revise	At the FSEL - NextEra discussed planned changes with inspection staff – Letter Revision, TBD	11. Complete anchor test program by December 31, 2012. Results will be available for NRC review approximately 30 days after testing is complete.
Under NRC Review. RPT 1/2	EB1	Ph I and II Lic. Compl. Item in Phase III Done last outage	Walkdown Uploaded to internal file as are Primary Containment Eng. Eval. & OD.	Not a CAL item since it was assumed to be completed or new completion at the time of the management meeting of April 23, 2012 – Phase III was noted during the meeting a issue to be completed – this is where Primary Containment indications were noted and report to the ACRS.

Re: Commitments made by NextEra in Letters, dated May 3 and May 10, 2012 (Agencywide Documents and Management System (ADAMS) Accession Numbers ML12125A022 and ML12131A479, respectively),

Report No. 1 (RPT 1): 050004432012009, Ended 11/2/12 - Issued 12/3/12

Report No. 2 (RPT 2): 050004432012010 to End - TBD

#### Confirmatory Action Letter for Alkali-silica Reaction Issue at Seabrook

#### Related List of References and ML Nos.

#### NRC Documents:

- 1. NRC Inspection Report No. 0500433/2011010, issued March 26, 2012 (ADAMS Accession No. ML120480066)
- 2. Management Meeting of April 23, 2010, Meeting Notice (ADAMS Accession No. ML1132360175)
- 3. Management Meeting of April 23, 2010, NRC Questions/Slides/Summary (ADAMS Accession Nos. ML121040102/ML121160333, ML121160433, and ML121220109)
- 4. Confirmatory Action Letter No. 2012-002, dated May 16, 2012 (ADAMS Accession No. ML12125A172)
- 5. Transcript of Advisory Committee on Reactor Safety (ACRS) Plant License Renewal Subcommittee Meeting of July 10, 2012, issued July 25, 2012 (ADAMS Accession No. ML122070401)
- 6. NRC Staff Alkali-Silica Reaction (ASR) Working Group Charter, issued July 9, 2012 (ADAMS Accession No. ML121250588, publicly available September 14, 2012)
- 7. NRC Staff Memorandum, issued September 5, 2012, on Request for Deviation from the Reactor Oversight Process Action Matrix to Provide Increased Oversight of the Alkali-Silica Reaction Issue at Seabrook (ADAMS Accession No. ML12242A372)
- 8. Letter to NextEra, issued September 12, 2012, Transmitting the Memorandum Related to the Deviation from the Reactor Oversight Process Action Matrix for Seabrook Station No. 1 (ADAMS Accession No. ML12242A363 (ADAMS Package))
- 9. NRC Inspection Report No. 0500433/2012009, issued December 3, 2012 (ADAMS Accession No. ML12338A283)
- Letter to C-10, D. Grinnell, issued December 3, 2012, Transmitting Answers to Questions Related to Seabrook ASR at Seabrook Station No. 1 (ADAMS Accession No. ML12339A233)
- 11. Letter to C-10, S. Gavutis, issued December 3, 2012, Response to Letter of September 13, 2012 (ADAMS Accession No. ML 12339A204)

12. Letter to Union of Concerned Scientists – D. Wright, issued December 3, 2012, Response to Letter of September 13, 2012 (ADAMS Accession No. ML 12339A322)

Licensee Documents (Publicly Available):

- 13. Management Meeting of April 23, 2010, NextEra/Consultant Slides (ADAMS Accession Nos. ML121160349, ML121160414, and ML121160422)
- 14. NextEra letters, dated May 3, 2012, "Actions for Resolution of Alkali Silica Reaction (ASR) Issues" and, dated May 10, 2012, "Supplement to Actions for Resolution of Alkali Silica Reaction (ASR) Issues," (ADAMS Accession Nos. ML12125A022 and ML12131A479, respectively)
- 15. NextEra Letter of May 24, 2012, Letter and Enclosure 1 for CAL Item 5, "Submit the root cause for the organizational causes associated with the occurrence of ASR at Seabrook Station and related corrective actions by May 25, 2012" (ADAMs Accession No. ML12151A396)
- 16. NextEra Letter of May 24, 2012, Enclosure 2 for CAL Item 3, "Submit the evaluation, 'Impact of ASR on Concrete Structures and Attachments' by May 25, 2012" (Foreign Print 100716) by May 25, 2012 (ADAMs Accession No. ML12151A397)
- 17. NextEra Letter of June 8, 2012, for CAL Item 4, "Submit the corrective action plan for the continued assessment of ASR in concrete structures at Seabrook Station including development of remedial actions to mitigate the effects of ASR, where warranted, by June 8, 2012" (ADAMS Accession No. ML12171A277)
- 18. NextEra Letter of June 21, 2012, for CAL Item 8, "Submit the technical details of the testing planned at the contracted research and development facility by June 30, 2012" (ADAMS Accession No. ML12179A281 and ML12179A282).