UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD.
KING OF PRUSSIA, PA 19406-2713

September 6, 2017

MEMORANDUM TO: Those on the Attached List

FROM: Brian E. Holian, Acting Director ***/RA/***
Office of Nuclear Reactor Regulation (NRR)

Daniel H. Dorman, Regional Administrator ***/RA/***
Region I

SUBJECT: SEABROOK ALKALI-SILICA REACTION ISSUE TECHNICAL TEAM CHARTER REVISION 2

The enclosed Revision 2 to the Seabrook Alkali-Silica Reaction (ASR) Issue Technical Team (SAITT) charter defines the purpose and objectives of the team. The background section of the charter has been revised to reflect (1) NextEra's completion of large-scale concrete specimen tests at the Ferguson Structural Engineering Laboratory (FSEL) at the University of Texas - Austin, (2) NextEra's submittal and NRC acceptance for review of a license amendment request (LAR) (ML16216A240) to address ASR affected structures and the current licensing basis, and (3) NextEra's submittal of revised license renewal application (LRA) sections for aging management programs (AMPs) including structures monitoring, ASR and building deformation (ML16362A283). The LAR and LRA submittals are under review by the NRC staff. Region I inspectors continue to perform baseline inspections to assess NextEra's performance to ensure the capability of Seabrook structures affected by ASR.

The SAITT charter objectives have also been updated. Objective (b) associated with NRC monitoring of testing at FSEL has been marked complete because this objective was fulfilled and the results of NRC monitoring were documented in NRC inspection and audit reports. Objectives (d) and (f) related to staff review of ASR related documents were combined and updated to specifically reference coordination of both NRC inspections and staff reviews of the ASR specific LAR and LRA submittals. Finally objective (e) was retained (and renumbered) related to review and assessment of operability determinations as was objective (f) involving coordination of stakeholder communications.

No changes were made to SAITT functional responsibilities. SAITT membership was updated to reflect staff changes in these positions. Additionally, guidance on quorums and decisions was removed to reflect the SAITT coordination role now that both the LAR and LRA regulatory review processes are in progress for this issue.

Docket No. 50-443

Enclosure:
SAITT Charter

CONTACT: Mel Gray, Region I/DRS
610-337-5209

SUBJECT: SEABROOK ALKALI-SILICA REACTION ISSUE TECHNICAL TEAM CHARTER REVISION 2 dated September 6, 2017

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ADAMS ACCESSION NUMBER: **ML17254A752**

☑ SUNSI Review		☑ Non-Sensitive ☐ Sensitive		☑ Publicly Available ☐ Non-Publicly Available	
OFFICE	RI/DRS	RI/DRS	RI/DRP	RI/DRS	DORL/DD
NAME	WCook	MGray	FBower	RLorson/JTY for	ABoland*
DATE	03/16/2017	03/20/2017	03/22/2017	04/11/2017	05/24/2017
OFFICE	DE/DD	DIRS/DD	DLR/DD	RI/RA	NRR/D
NAME	JLubinski*	CMiller*	GWilson*	DDorman	BHolian*
DATE	05/25/2017	07/05/2017	06/09/2017	08/11/2017	09/06/2017

*** =** Concurrence via email

OFFICIAL RECORD COPY

Memorandum to Those on the Attached List dated September 6, 2017

SUBJECT: SEABROOK ALKALI-SILICA REACTION ISSUE TECHNICAL TEAM CHARTER REVISION 2

ADDRESSEES:

Region I (RI)
Daniel Dorman, Regional Administrator
David Lew, Deputy Regional Administrator
Ray Lorson, Director, Division of Reactor Projects (DRP)
Jimi Yerokun, Director, Division of Reactor Safety (DRS)
Blake Welling, Deputy Director, DRS
Fred Bower, Chief, Reactor Projects Branch 3, DRP
Paul Cataldo, Senior Resident Inspector, Seabrook, DRP
Peter Meier, Resident Inspector, Seabrook, DRP
William Cook, Senior Reactor Analyst (SRA), DRS
Mel Gray, Chief, Engineering Branch 1, DRS
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Diane Screnci, Office of Public Affairs (OPA)
Neil Sheehan, OPA
Jonathan Greives, State Liaison Office (SLO)
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Office of Nuclear Reactor Regulation (NRR)
Brian McDermott, Dep. Director for Engineering, NRR
Mirela Gavrilas, Director, Division of Safety Systems (DSS)
Anne Boland, Director, Division of Operating Reactor Licensing (DORL)
John Lubinski, Director, Division of Engineering (DE)
George Wilson, Director, Division of License Renewal (DLR)
Chris Miller, Director, Division of Inspection & Regional Support (DIRS)
Louis Lund, Director, Division of Policy and Rulemaking (DPR)
Brian Wittick, Chief, Structural Engineering Branch (ESEB), DE
James Danna, Chief, Plant Licensing Branch No. 1 (PL-I), DORL
Justin Poole, Seabrook Project Manager, PL-I, DORL
Sheldon Stuchell, Chief, License Renewal Projects Branch, DLR
Shaun Anderson, Acting Chief, Reactor Inspection Branch (IRIB), DIRS
Harold Chernoff, Chief, Operating Experience Branch, DIRS

CHARTER FOR THE

SEABROOK ALKALI-SILICA REACTION ISSUE TECHNICAL TEAM (Revision 2)

Background:

Alkali-silica reaction (ASR) adversely impacts the physical properties of hardened concrete. ASR is a slow chemical process in which the alkalis in the cement react, in the presence of water, with the susceptible silica contained in the concrete aggregate. The chemical reaction results in an alkali-silica gel that expands within the concrete conglomerate causing micro cracks. As the gel absorbs water, the micro cracks expand and cause a weakening of the concrete (affecting the compressive strength, tensile and shear strength, and elasticity modulus) and potentially the structural integrity of the reinforced concrete structures that house and support safety-related systems.

The NRC issued a Confirmatory Action Letter (CAL) Number 1-2012-002, dated May 16, 2012 (ADAMS Accession No. ML12125A172), which confirmed commitments by NextEra in regards to actions taken and planned to address the non-conforming ASR issue at Seabrook Station. The results of the NRC inspections to verify that NextEra had satisfactorily completed each CAL commitment are documented in NRC Inspection Reports 05000443/2012009, dated December 3, 2012 (ML12338A283), and 05000443/201210, dated August 9, 2013 (ML13221A172). The NRC closed the CAL in a letter to NextEra dated October 9, 2013 (ML13274A670).

NextEra initiated a large specimen testing program in 2013 to determine the impact of ASR on concrete structures at the University of Texas' Ferguson Structural Engineering Laboratory (FSEL). This testing and associated test reports (ML16216A241 and ML16216A242) were completed in July 2016 and were used in support of amendments to the Seabrook license renewal application (LRA), and for development of an ASR license amendment request (LAR) to support resolution of the open ASR-affected structures' final operability determinations.

In 2014, the NRC documented findings involving discrete, horizontal cracking in an internal wall of the Residual Heat Removal (RHR) vault and displacements and cracking associated with the Fuel Storage Building. In 2015, the NRC documented findings that identified global bulk expansion of the containment enclosure building. The staff concluded these findings were of very low safety significance because the safety function of these structures was not affected.

As part of the LRA process, the NRC requested additional information from NextEra to assess whether the effects of aging involving building deformation and discrete cracks will be adequately managed so that intended functions are maintained consistent with the current licensing basis during the period of extended operation. NextEra's response was received by the NRC on Aug. 9, 2016, and is currently under review. The response described that NextEra is conducting a Structures Monitoring and Assessment Program at Seabrook Station to track the progression of ASR in affected reinforced concrete structures.

On August 1, 2016, NextEra submitted a License Amendment Request (ML16216A240) to revise the Seabrook Updated Final Safety Analysis Report (UFSAR) to include methods for analyzing seismic Category I structures with concrete affected by ASR.

The NRC Seabrook ASR Issue Technical Team (SAITT) was established to provide coordinated agency oversight of NextEra's activities to address this non-conforming condition.

Purpose:

To facilitate oversight and coordination of the NRC onsite inspections, in-office technical reviews, and other associated evaluation and assessment activities involving NextEra's actions to resolve the ASR issues at Seabrook Station.

Objectives:

a. To support review and assess the results of the onsite ASR monitoring of ASR-affected reinforced concrete structures.

b. To monitor activities involving anchor, shear and lap splice test specimens at the FSEL and assess the results of remediation testing, if required. **Completed - July 2016.**

c. To ensure NextEra maintains compliance with its license as new information is gathered from the Structures Monitoring and Assessment Program.

d. To support region based inspections and NRC staff review of NextEra's LAR (ML16216A240) dated August 1, 2016, along with LAR supporting documents (ML16216A250), and LRA submittals associated with ASR-related aging management programs described in a submittal dated December 23, 2016 (ML16362A283).

e. To ensure a coordinated review and assessment of the operability determinations and supporting engineering evaluations, including review of any associated corrective actions.

f. To support a coordinated review for all public and congressional inquiries related to ASR at Seabrook.

Functional Responsibilities:

a. Provide updates to Divisional management, the Region I Administrator and NRR Office Director after key milestones are completed, and as requested.

b. Convene team meetings, as necessary, to review licensee progress and assess structural monitoring program observations.

c. Ensure documentation of significant SAITT findings, observations, and decisions in NRC Audit and Inspection Reports, as appropriate.

d. Prepare for and conduct public outreach activities, as appropriate. Maintain the Seabrook Concrete ASR Degradation public webpage up-to-date: http://www.nrc.gov/info-finder/reactor/seabrook/concrete-degradation.html.

e. Make a recommendation to the Regional Administrator (RI) and Director (NRR) to dissolve the SAITT upon satisfactory completion of the above stated objectives.

SAITT Membership: (As of issuance of this Charter, Revision 2)*

Chairman:	Branch Chief, EB1, DRS, RI (Mel Gray)
Vice Chairman:	Senior Reactor Analyst, DRS, RI (William Cook)
Member Positions:	Branch Chief, DE, NRR (Brian Wittick)
	Branch Chief, DORL, NRR (James Danna)
	Branch Chief, DLR, NRR (Sheldon Stuchell)
	Branch Chief, DIRS/IRIB, NRR (Shaun Anderson)
	Branch Chief, Projects Branch 3, DRP, RI (Fred Bower)

* Note: Membership is incumbent upon position, not specific individuals

THIS CHARTER IS APPROVED FOR IMPLEMENTATION ON September 6, 2017

/RA/
Daniel H. Dorman
Regional Administrator
Region I

/RA/
Brian E. Holian
Acting Director
Office of Nuclear Reactor Regulation