



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

July 29, 2016

LICENSEE: NextEra Energy Seabrook, LLC

FACILITY: Seabrook Station, Unit No. 1

SUBJECT: SUMMARY OF JUNE 15, 2016, PRESUBMITTAL MEETING WITH NEXTERA ENERGY REGARDING PROPOSED LICENSE AMENDMENT REQUEST ON ALKALI SILICA REACTION (CAC NO. MF7996)

On June 15, 2016, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of NextEra Energy (NextEra, the licensee) at NRC Headquarters, Three White Flint North, 11601 Landsdown Street, Rockville, Maryland. The purpose of the meeting was to discuss NextEra's planned license amendment request (LAR) to include the impacts of alkali silica reaction (ASR) into the licensing basis at the Seabrook Station, Unit No. 1 (Seabrook). The meeting notice and agenda, dated May 31, 2016, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML16153A279. A list of attendees is enclosed. The licensee's presentation is available in ADAMS at Accession No. ML16168A412.

The licensee presented its plans to submit an LAR by July 31, 2016, to propose a change in the Updated Final Safety Analysis Report methodology to address ASR concrete degradation at Seabrook. The current licensing basis for Seabrook is ACI 318-71 for all seismic Category I structures other than containment and American Society of Mechanical Engineers Boiler & Pressure Vessel Code (ASME Code), Section III, for containment. Neither of these codes takes into account the loads and stresses associated with ASR. The licensee stated that the LAR will show how the acceptance criteria for ACI 318-71 and ASME Code, Section III, will still be met after adding the loads and stresses associated with ASR for Seabrook.

The licensee went on to describe the testing programs it developed to investigate the structural impact of ASR on reinforced concrete. The NRC staff questioned whether the basis for the licensee's conclusions would be included as part of the submittal, and NextEra indicated it would be included. The NRC staff also asked whether an explanation as to how the test methods and results are applicable to Seabrook would be included in the submittal, and NextEra said that they would be included.

The next portion of the licensee's presentation focused on its proposed methodology to evaluate structural deformation due to ASR at Seabrook. The licensee indicated that the LAR would describe a progressive approach for evaluating structures with deformation. The approach will have three stages (1 - Screening, 2 - Analytical, and 3 - Detailed), and each stage has a progressively more complex evaluation to ensure adequate margin exists to either the ACI 318-71 or ASME Code, Section III, limits. As an example, if the Stage 1 evaluation for a building showed there was adequate margin, then a Stage 2 or Stage 3 evaluation was not required. Since the evaluations are done for each applicable building, each evaluation also defines the threshold for monitoring that specific building.

The NRC staff had a number of questions on the modeling techniques NextEra would be using to refine its calculations for the different stages. The NRC staff stated that this would be an important portion of its review. NextEra acknowledged the NRC staff's concerns.

The licensee then went on to describe its ASR monitoring program. NextEra stated that the monitoring program will ensure that the expansion seen at the plant is bounded by the limits established from the test program. The licensee will update its Structural Monitoring Program (SMP) with new monitoring requirements. NextEra then described the tiered approach of this program, including actions taken and proposed criteria (slide 27 of the licensee's presentation). The NRC staff asked whether the SMP, or at least this new monitoring criteria for ASR, would be included in the submittal. NextEra said that was not its intention but would take this into consideration.

During the meeting, the NRC staff asked if the submittal would address the effect of ASR on concrete material properties and whether the information would be included as part of the submittal. The NRC staff also asked questions related to NextEra implementing its methodology for addressing deformation (i.e., have any evaluations been completed for any of the structures, what is the timeline for completing all of the evaluations, and will any evaluations be included as part of the submittal, or at least completed prior to the submittal). NextEra acknowledged the NRC staff concerns and will consider them in preparing the final document.

Members of the public were in attendance but no comments were made. Public Meeting Feedback forms were not received.

Please direct any inquiries to me at 301-415-2048 or by e-mail to Justin.Poole@nrc.gov.



Justin C. Poole, Project Manager
Plant Licensing Branch 1-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure:
List of Attendees

cc w/enclosure: Distribution via Listserv

LIST OF ATTENDEES

JUNE 15, 2016, MEETING WITH NEXTERA ENERGY

PRESUBMITTAL MEETING ON PROPOSED ALKALI SILICA REACTION LICENSE

AMENDMENT FOR SEABROOK STATION, UNIT NO. 1

NRC Participants:

- Doug Broaddus, Branch Chief, Office of Nuclear Reactor Regulation (NRR)/Division of Operating Reactor Licensing (DORL), LPL1-2
- Justin Poole, Project Manager, NRR/DORL
- Yong Li, Acting Branch Chief, NRR/Division of Engineering (DE), Mechanical and Civil Engineering Branch
- Kamal Manoly, Senior Technical Advisor, NRR/DE
- Farhad Farzam, Senior Structural Engineer, NRR/DE
- Bryce Lehman, Technical Reviewer, NRR/DE
- Brian Wittick, Branch Chief, NRR/Division of License Renewal (DLR), Aging Management of Structures, Electrical and Systems Branch
- George Thomas, Senior Structural Engineer, NRR/DLR
- Tam Tran, Project Manager, NRR/DLR
- Fred Bower, Branch Chief, Region 1, Division of Reactor Projects, Branch 3
- Bill Cook, Senior Reactor Analyst, Region 1

NextEra Participants:

- Larry Nicholson, Licensing Director
- Ken Browne, ASR Project Manager
- Brian Brown, Principal Engineer
- Steven Hamrick, Attorney
- Said Bolourchi, Senior Principal, SGH
- John Simons, General Manager, MPR
- Amanda Card, Engineer, MPR
- James Moroney, Project Manager, MPR
- Phil Rush, Engineer, MPR

Public:

- Jana Bergman, Technical Writer, Curtiss-Wright/Scientech

Enclosure

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/RA/
Justin C. Poole, Project Manager
Plant Licensing Branch 1-2
Division of Operating Reactor Licensing
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ADAMS Accession No.: ML16204A261 Meeting Notice: ML16153A279 Handouts: ML16168A412

OFFICE	NRR/DORL/LPL1-2/PM	NRR/DORL/LPL1-2/LA	NRR/DORL/LPL1-2/BC	NRR/DORL/LPL1-2/PM
NAME	JPoole	LRonewicz	DBroaddus (REnnis for)	JPoole
DATE	7/26/2016	7/25/2016	7/29/2016	7/29/2016