



***Seabrook Annual
Assessment
Meeting & Update on ASR-
impacted Concrete***

**Nuclear Regulatory Commission - Region I
Hampton, NH
June 7, 2017**



NRC Staff

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AGENDA

- 2016 Safety Performance Overview
- NRC Inspections of ASR-impacted concrete
- ASR License Amendment Request
- License Renewal Status
- Question and Answer Session
- Closing Remarks



Seabrook 2016 Safety Performance Overview

Safety Assessment Summary

- Operated safely and in a manner that preserved the public health and safety and protected the environment
- Licensee Response Column
- 6,700 hours of inspection and related activities
- All Green Findings and Performance Indicators
- 1 Severity Level (SL) III violation issued which stemmed from a security incident in August 2015



NRC Inspections of ASR-impacted Concrete

What is ASR?

- ASR has been identified in localized areas of Seabrook concrete structures
- ASR is a chemical reaction in concrete, which occurs over time in the presence of water, between the alkaline cement and reactive silica found in some aggregates.
- ASR forms a gel that expands causing micro-cracks that effect concrete material properties



NRC Inspections of ASR-impacted Concrete

Inspection Summary

- NRC issued a violation in 2016 for not evaluating ASR effects of bulk deformation in Containment Enclosure Building and Underground Equipment Vault Wall Cracks
 - Violation of very low safety significance because structural capability was maintained
 - NRC completed inspection in October 2016 to confirm effectiveness of actions to prevent recurrence
- NRC specialist inspections completed every six months; one ongoing this week



ASR License Amendment Request (LAR)

- On June 15, 2016, public meeting held - NextEra presented its plan for revising the licensing basis for concrete structures at Seabrook impacted by ASR
- On August 1, NextEra submitted a License Amendment Request (LAR) to revise the current licensing basis - Requested approval of a methodology to analyze seismic Category I concrete structures.
- Application was formally accepted on October 12.
- Application is currently under NRC staff review – Expected to take until August 2018.



License Renewal Application (LRA) Review Status

- NextEra submitted a license renewal application (LRA) in June 2010
- License renewal safety review is ongoing; NRC decision on the application has not been finalized
- Reasonable assurance that aging effects of ASR on concrete can be adequately managed is needed
- Remaining schedule milestones, including 2nd ACRS Subcommittee meeting, are “to be determined”



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- **Questions?**