



February 27, 2014  
SBK-L-14041  
Docket No. 50-443

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Seabrook Station

NextEra Energy Seabrook, LLC's Second Six-Month Status Report in Response to the March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)

References:

1. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012 (ML12054A736)
2. NRC Interim Staff Guidance JLD-ISG-2012-01, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0, dated August 29, 2012 (ML12229A174)
3. NEI 12-06, Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, Revision 0, dated August 2012 (ML12242A378)
4. NextEra Energy Seabrook, LLC Initial Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, (Order Number EA-12-049), dated October 26, 2012 (ML12311A013)
5. NextEra Energy Seabrook, LLC Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, (Order Number EA-12-049), dated February 26, 2013 (ML13063A438)
6. NextEra Energy Seabrook, LLC First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, (Order Number EA-12-049), dated August 28, 2013 (ML13247A178)

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NRC

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued an order (Reference 1) to NextEra Energy Seabrook, LLC (NextEra Energy Seabrook). Reference 1 was immediately effective and directs NextEra Energy Seabrook to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event. Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (Reference 2) and an overall integrated plan pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document NEI 12-06, Revision 0 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided the NextEra Energy Seabrook initial status report regarding mitigation strategies. Reference 5 provided the NextEra Energy Seabrook overall integrated plan.

Reference 1 requires submission of a status report at six-month intervals following submittal of the overall integrated plan. Reference 3 provides direction regarding the content of the status reports. Reference 6 provided the first six-month status report pursuant to Section IV, Condition C.2, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The purpose of this letter is to provide the second six-month status report pursuant to Section IV, Condition C.2, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The enclosed report provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief and the basis, if any.

This letter contains no new regulatory commitments.

If you have any questions regarding this report, please contact Mr. Michael Ossing, Licensing Manager, at (603) 773-7512.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 27<sup>th</sup>, 2014.

Sincerely,



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Kevin T. Walsh  
Site Vice President  
NextEra Energy Seabrook, LLC

cc: NRC Region I Administrator  
J.G. Lamb, NRC Project Manager, Project Directorate 1-2  
NRC Senior Resident Inspector  
Director, Office of Nuclear Reactor Regulation  
Ms. Jessica A. Kratchmann, NRR/JLD/PMB, NRC  
Mr. Eric E. Bowman, NRR/DPR/PGCB

Mr. Perry Plummer, Director Homeland Security and Emergency Management  
New Hampshire Department of Safety  
Division of Homeland Security and Emergency Management  
Bureau of Emergency Management  
33 Hazen Drive  
Concord, NH 03305

Mr. John Giarrusso, Jr., Nuclear Preparedness Manager  
The Commonwealth of Massachusetts  
Emergency Management Agency  
400 Worcester Road  
Framingham, MA 01702-5399

Enclosure to SBK-L-14041

NextEra Energy Seabrook, LLC's Second Six-Month Status Report in Response to March 12,  
2012 Commission Order Modifying Licenses with Regard to Requirements for  
Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)

## Enclosure

# NextEra Energy Seabrook, LLC's Second Six Month Status Report for the Implementation of Order EA-12-049, 'Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events'

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## 1 Introduction

NextEra Energy Seabrook, LLC (NextEra Energy Seabrook) developed and submitted an Overall Integrated Plan (OIP) (Reference 1) in response to NRC Order EA-12-049. The OIP describes Seabrook's proposed diverse and flexible coping strategies (FLEX). This status report provides an update of milestone accomplishments since submittal of the OIP, including any changes to the compliance method, schedule, or need for relief/relaxation, if any.

## 2 Milestone Accomplishments

With the submittal of this report the following milestones have been completed since the submittal of the OIP:

- Submit first 6 month status report
- Submit second 6 month status report

## 3 Milestone Schedule Status

The following table provides an update to Attachment 2 of the Seabrook OIP (Reference 1). The table includes the current status of each item and whether the expected completion date has changed. As noted in the original station submittal these dates are planning dates which are subject to change as design and implementation details are developed.

The following milestone target completion dates have been adjusted or added:

- In the submittal of the OIP in February 2013, Seabrook included Westinghouse SHIELD® low leakage RCP seals in all 4 RCPs as a backup strategy against significant RCS leakage to Containment. Seabrook continues to monitor the progress of the SHIELD® seal technology as a result of the test failures at Beaver Valley. The SHIELD® seals will not be installed at Seabrook Station in April 2014 during refueling outage 16, as the low leakage seals are not required for the backup strategy.
- The start of installation of the Supplemental Emergency Power System (SEPS) missile shield has been extended to March 2015.

Revised milestone target completion dates do not currently impact NextEra Energy Seabrook's full compliance date.

<b>Milestone</b>	<b>Target Completion Date</b>	<b>Activity Status</b>	<b>Revised Target Completion Date</b>
Submit Overall Integrated Implementation Plan	February 2013	Complete	N/A
<b>Submit 6 Month Updates:</b>			
Update 1	Aug 2013	Complete	N/A
Update 2	Feb 2014	Complete	N/A
Prepare engineering change packages for SEPS missile barrier and RCP low leakage seals (if necessary)	December 2013	Conceptual missile barrier design completed	December 2014 for RCP low leakage seals (if necessary)
Prepare bid for construction of SEPS missile barrier	February 2014	In progress	March 2014
Install RCP shutdown seals in two pumps in refueling outage #16	April 2014	Re-evaluating SHIELD seal technology	TBD
Submit 3rd 6-month status report to NRC	August 2014	Not started	N/A
Revise / develop procedures based upon approved strategies and engineering implementation packages	December 2014	Not started	N/A
Develop required training for station staff based upon draft procedure changes and engineering change packages.	December 2014	Not started	N/A
Procure SEPS / portable equipment refueling trailer	December 2014	Not started	N/A
Submit 4 <sup>th</sup> 6-month status report to NRC	February 2015	Not started	N/A
Construct SEPS missile barrier	March 2015	Not started	N/A
Develop PMs for refueling trailer	March 2015	Not started	N/A

<b>Milestone</b>	<b>Target Completion Date</b>	<b>Activity Status</b>	<b>Revised Target Completion Date</b>
Store refueling trailer in Service Water Pump house	June 2015	Working	N/A
Fall 2015 implementation Sites – RRC Operational	June 2015	Not started	N/A
5 <sup>th</sup> and final 6-month status report to NRC	August 2015	Not started	N/A
Conduct walkthroughs / demonstrations of portable equipment connection points	August 2015	New	N/A
Implement training for station staff	September 2015	Not started	N/A
Install two RCP shutdown seals in Refueling Outage #17	October 2015	Not started	N/A
Final implementation – Order full compliance letter to NRC	November 2015	Not started	N/A

#### **4 Changes to Compliance Method**

NextEra Energy Seabrook has received feedback in the form of NRC audit questions and subsequent teleconferences with NRC Staff reviewers. The NRC’s Interim Safety Evaluation (ISE) was received just prior to the due date of this letter. Changes to the Order compliance method described in the OIP submitted in February 2013 that are required to address open items and confirmatory items in the ISE, will be submitted by separate transmittal or no later than the next 6 month status report.

#### **5 Need for Relief/Relaxation and Basis for the Relief/Relaxation**

Seabrook currently expects to comply with the order implementation date and no relief/relaxation is required at this time. Should the NRC staff ISE require significant changes to the strategies defined in the OIP, it may be necessary for NextEra Energy Seabrook to request relief/relaxation at some time in the future.

## 6 Open Items from Overall Integrated Plan and NRC Interim Staff Evaluation /TER

The following Table provides a summary of the Pending Items documented in the Overall Integrated Plan:

	<b>Overall Integrated Plan Pending Actions</b>	<b>Status</b>
1	Revise ECA-0.0 to include a step to determine if an extended loss of offsite power event is in progress. This determination will delineate future procedural strategies and transitions.	Not started
2	Revise ECA-0.0, Attachment 'A' to include a Table of loads for an extended loss of offsite power event or create a new Attachment with this information.	Not started
3	A seismic evaluation will be conducted on the connections that penetrate the upper half of the CST to determine if NextEra Energy Seabrook can take credit for the entire tank volume for Phase 1 & 2 event coping.	In progress
4	Revise ECA-0.0 or ES-0.1 to add a step to manually shutdown the motor-driven EFW pump if the TDEFW pump is running satisfactorily.	Not started
5	Add an Attachment to ES-0.2, ES-0.3 and ES-0.4 that provides a Table of electrical loads for responding to an extended loss of offsite power event.	Not started
6	Develop a Supplemental Emergency Power System (SEPS) generator set (genset) refueling strategy from 1) an offsite supplier outside a 25 mile radius from the station (primary strategy), and 2) the Emergency Diesel Generator (EDG) fuel oil storage tanks using a refueling trailer stored in the Service Water Pumphouse (backup strategy). This strategy will include provisions for refueling within 24 hours in the event that only a single SEPS is functional.	In Progress



	<b>Overall Integrated Plan Pending Actions</b>	<b>Status</b>
7	Revise ES-0.2, ES-0.3, and ES-0.4 to include a step for implementation of a SEPS genset refueling strategy.	Not started
8	Develop a Flexible Strategy Guideline (FSG) for refueling SEPS from the EDG fuel oil storage tanks using a portable refueling trailer. Utilize the information contained in existing procedure OS1061.02, 'Receipt of SEPS Fuel Oil', for development of the FSG.	Not started
9	Revise ES-0.2, ES-0.3, and ES-0.4 to include direction for connecting the backup diesel-driven air compressor to the service air system to restore instrument air system pressure.	Not started
10	Develop required preventive maintenance actions and surveillance test procedures for the refueling trailer that will be procured and stored in the service water pumphouse.	Not started
11	Revise OS1246.01, 'Loss of Offsite Power - Plant Shutdown', to address a reactor de-fueled condition ('Mode 7'). In that case restoration of spent fuel pool cooling is paramount as opposed to restoration of RHR cooling.	Not started
12	Conduct an engineering evaluation to determine if the existing hurricane enclosures for the SEPS gensets provide adequate missile protection. If protection is not adequate, develop a design change (EC) to add missile protection for the SEPS gensets.	In progress
13	Evaluate the 'seismic robustness' of SEPS and determine if enhancements are needed with respect to the new Ground Motion Response Spectrum (GMRS) data for the site. This data will not be available until the seismic hazard re-evaluation is conducted in accordance Recommendation 2.1 of the 10 CFR 50.54(f) RFI letter.	In progress

	<b>Overall Integrated Plan Pending Actions</b>	<b>Status</b>
15	Formalize the engineering assessment of ELAP load capacity for a single SEPS genset and modify procedural guidance in the applicable EOPs and AOPs, as necessary.	In progress
16	Evaluate the impact on the capability to implement the snow removal plan of missile protection barriers that may be installed to protect the SEPS gensets and revise the plan as necessary.	Not started
17	Determine if a quantity of diesel fuel will be provided from the Regional Response Centers (RRCs) along with requested Phase 3 portable equipment. If not, establish a contract with a fuel supplier outside a 25 mile radius from the plant to provide fuel within 48 hours of a BDBEE.	Not started
18	Develop a FSG for staging and deployment of Phase 3 equipment from the RRCs into the protected area.	Not started
19	Develop a FSG for connecting the 2MW generators from the RRC to 4.16 KV Emergency Busses E5 and E6.	Not started
20	Develop a FSG for refueling the RRC generators or incorporate this action into the SEPS refueling FSG.	Not started
21	Implement low leakage RCP seals on all four RCPs as a backup strategy to minimize RCS leakage into containment.	As noted previously in this report Seabrook is re-evaluating the SHIELD® seal technology as a result of the test failures at Beaver Valley.
22	Based on PWROG guidance, determine if new FSGs that incorporate the existing guidance provided in SAG-1, 'Inject to the SGs', and SAG-3, 'Inject to the RCS' are required or whether transition points to these two SAMGs should be added to the applicable EOPs.	Not started

	<b>Overall Integrated Plan Pending Actions</b>	<b>Status</b>
23	Develop a method for obtaining local readings for the 12 critical parameters identified on page 12 of 60 of the OIP and include in site procedures as appropriate.	Not Started

## 7 Potential Draft Safety Evaluation Impacts

<b>Draft Safety Evaluation Open Item</b>	<b>Status</b>
A draft safety evaluation has not yet been received. Consequently, there are no potential impacts to the draft safety evaluation identified at this time.	N/A

## 8 References

The following references support the updates to the Overall Integrated Plan described in this enclosure.

1. NextEra Energy Seabrook LLC - SBK-L-13038 - Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049),” dated February 26, 2013.
2. NRC Order EA-12-049, “Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,” dated March 12, 2012.
3. NextEra Energy Seabrook, LLC First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, (Order Number EA-12-049), dated August 28, 2013