



March 6, 2015  
SBK-L-15039  
Docket No. 50-443

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

Seabrook Station

Extension Request Regarding the Flooding Hazard Reevaluation Report Required by  
NRC Request for Information Pursuant to Title 10 of the Code of Federal Regulations  
50.54(f) Regarding Recommendation 2.1, Flooding, of the Near-Term Task Force  
Review of Insights from the Fukushima Dai-ichi Accident

References:

1. NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 (ML12053A340).
2. NRC Letter, "Prioritization of Response Due Dates for Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated May 11, 2012 (ML12097A509).
3. NRC Letter, "Supplemental Information Related to Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 1, 2013 (ML13044A561).
4. NextEra Energy Seabrook letter SBK-L-12243 to U.S. Nuclear Regulatory Commission, "Response to NRC 10CFR 50.54(f) Request for Information Regarding Near-Term Task Force Recommendation 2.3, Flooding," dated November 27, 2012 (ML12342A008).

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NRR

On March 12, 2012, the Nuclear Regulatory Commission (NRC) staff issued Reference 1 to all NRC power reactor licensees and holders of construction permits in active or deferred status. Enclosure 2 of Reference 1 contains specific requested actions, requested information, and required responses associated with Near-Term Task Force (NTTF) Recommendation 2.1 for flooding hazards. Enclosure 2 of Reference 1 directed reevaluation of flooding hazards at sites and indicated that a Hazard Reevaluation Report (HRR) would be due within one to three years from the date of the Reference 1 letter. On May 11, 2012, the NRC issued the Reference 2 letter that contained the NRC's prioritization plan and due dates for licensees to submit HRRs. Seabrook Station Unit 1, operated by Nextera Energy Seabrook, LLC (NextEra Energy Seabrook), was identified as a Category 3 site in Reference 2 and was required to submit its HRR by March 12, 2015.

In Reference 3, the NRC provided supplemental information that states incomplete HRRs that only contain an analysis of some flooding hazard mechanisms would not be of substantive benefit for staff review and would not be acceptable. Therefore, Reference 3 recommends that licensees not submit partial reports, but instead submit an extension request.

The purpose of this letter is to request an extension of the March 12, 2015 due date for submittal of the HRR for Seabrook Station. The enclosure to this letter contains the extension request. The extension request was prepared using the guidance in Reference 3 and includes the reasons for the delay, a proposed date for the submittal of a complete HRR, and the basis for acceptability of the revised date.

#### Summary of Commitments

This letter revises the due date for one existing regulatory commitment, and contains no new regulatory commitments.

- NextEra Energy Seabrook will submit the required flood HRR for Seabrook Station Unit 1 by September 30, 2015.

Should you have any questions concerning the content of this letter, 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 March 6, 2015.

Sincerely,

NextEra Energy Seabrook, LLC



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Dean Curtland  
Site Vice President

Enclosure

cc: D. Dorman, NRC Region I Administrator  
J.G. Lamb, NRC Project Manager, Project Directorate 1-2  
P. Cataldo, NRC Senior Resident Inspector  
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Enclosure to SBK-L-15039

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## Extension Request Regarding the Flooding Hazard Reevaluation Report

### 1.0 Introduction

On March 12, 2012, the Nuclear Regulatory Commission (NRC) Staff issued the Reference 1 letter to all NRC power reactor licensees and holders of construction permits in active or deferred status. Enclosure 2 of Reference 1 contains specific requested actions, requested information, and required responses associated with Near-Term Task Force (NTTF) Recommendation 2.1 for flooding hazards. Enclosure 2 of Reference 1 directed reevaluation of flooding hazards at sites and indicated that a Hazard Reevaluation Report (HRR) would be due within one to three years from the date of the Reference 1 letter. On May 11, 2012, the NRC issued the Reference 2 letter that contained the NRC's prioritization plan and due dates for licensees' submittal of HRRs. Seabrook Station Unit 1, operated by NextEra Energy Seabrook, LLC (NextEra Energy Seabrook), was identified as a Category 3 site in Reference 2 and was required to submit the HRR by March 12, 2015.

In Reference 3, the NRC provided supplemental information stating incomplete HRRs that only contain an analysis of some flooding hazard mechanisms would not be of substantive benefit for staff review and would not be acceptable. Therefore, Reference 3 recommends that licensees not submit partial reports, but instead submit an extension request.

The purpose of this Enclosure is to request an extension to the March 12, 2015 due date for the submittal of the HRR for Seabrook Station Unit 1. As recommended in Reference 3, the reasons for the delay, the proposed schedule for the submittal of the complete HRR, and the basis for the acceptability of the revised schedule are described below.

### 2.0 Reasons for the Delay

NextEra Energy Seabrook is employing the hierarchical hazard approach (HHA) concept described in the Reference 1 letter to perform the flooding hazard reevaluation. From Reference 1, the HHA is a progressively refined, stepwise estimation of site-specific hazards that evaluates the safety of structures, systems and components (SSCs) with the most conservative plausible assumptions consistent with available data. This approach starts with the use of simple, conservative assumptions to develop the probable maximum event for each of the evaluated hazards. For a given hazard, if the result is bounded by the current licensing basis or is negligible, no further effort is needed. If the result is beyond the current licensing basis, the evaluation is refined until it can be shown that the safety-related SSCs are not affected, or when further refinements to the evaluation do not materially change the evaluation results. Several iterations of the flood hazard assessment, often involving inclusion of additional site-specific data, may be needed.

The modeling and analysis of the Seabrook site for the flooding re-evaluation has been more complex than anticipated. Initial efforts using very conservative inputs and assumptions resulted in overly conservative results for the Local Intense Precipitation (LIP) and the wave

runup portion of the Probable Maximum Storm Surge/Combined Events (PMSS/CE) evaluations. Refinements in the computer modeling, inputs, and assumptions have improved the results, but further iterations are necessary to ensure realistic final results. If left to stand, the current values would result in unnecessarily burdensome interim and final actions to protect the unit. Implementation of these actions could detract from other, potentially more important actions needed to prepare for or respond to major climatological events. Further time is needed to complete model refinement and finalize results.

NextEra Energy Seabrook is working to refine the hazards assessments using more site-specific inputs. This may include adding further detail to the computer modeling used in the analysis and additional model runs. Additional reviews by outside experts are also planned. The extended submittal date provides the additional time required for NextEra Energy Seabrook to perform the analytical refinements per the methodology described above and obtain any necessary reviews.

### 3.0 Proposed Submittal Date

NextEra Energy Seabrook proposes a revised submittal date for the Seabrook Station Unit 1 Flood Hazard Reevaluation Report of September 30, 2015. This timing supports refinement of the hazard evaluations and incorporation of the results into the HRR. The due date for the Integrated Assessment (due two years following submittal of the Flood Hazard Reevaluation Report) will be held to its original date of March 12, 2017.

### 4.0 Basis for Acceptability of the Revised Date

NextEra Energy Seabrook's proposed submittal schedule extension is acceptable based on the discussion below:

- The NRC's March 12, 2012, 50.54(f) cover letter states that the current regulatory approach and the resultant plant capabilities provide confidence that an accident with consequences similar to the Fukushima accident is unlikely to occur in the United States. The NRC letter concluded that continued plant operation and the continuation of licensing activities do not pose an imminent risk to public health and safety.
- NextEra Energy Seabrook has performed walkdowns to verify its current flooding licensing basis (Reference 4). No deficiencies were found, and these walkdowns verified that permanent SSCs are adequately protected from external flooding and capable of performing their design function as credited in the current licensing basis.
- The events being analyzed in the NextEra Energy Seabrook HRR are beyond the plant's design and licensing basis as noted in Reference 3. The reevaluation results do not, therefore, constitute an operability concern.

- The extreme nature of the reevaluated flooding hazards makes them very low probability events. The time frame of the submittal extension is short relative to the probability of occurrence of the flooding events being evaluated, and would result in an insignificant contribution to overall risk.
- NextEra Energy Seabrook will issue the Integrated Assessment to the NRC by its original due date of March 12, 2017.
- The LIP and PMSS/CE evaluations are the two flooding hazard evaluations undergoing additional refinement. Evaluation of other flooding hazards, such as Tsunami, Seiche, and Ice Effects, have shown such hazards to not be a concern for the Seabrook site.

#### 5.0 References:

1. NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 (ML12053A340).
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