



September 12, 2013

Docket No. 50-443
SBK-L-13174

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20582

Seabrook Station

Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident – 1.5 Year Response for CEUS Sites

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. (ML12073A348)
2. NRC Letter, Endorsement of EPRI Final Draft Report 1025287, "Seismic Evaluation Guidance," dated February 15, 2013. (ML12318A074)
3. EPRI Report 1025287, Seismic Evaluation Guidance: Screening, Prioritization and Implementation Details (SPID) for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic. (ML12333A170)
4. NEI Letter to NRC, Proposed Path Forward for NTTF Recommendation 2.1: Seismic Reevaluations, dated April 9, 2013. (ML13101A379)
5. NRC Letter, EPRI Final Draft Report XXXXXX, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Near-Term Task Force Recommendation 2.1: Seismic," as an Acceptable Alternative to the March 12, 2012, Information Request for Seismic Reevaluations, dated May 7, 2013. (ML13106A331)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Reference 1 to all power reactor licensees and holders of construction permits in active or deferred status. Enclosure 1 of Reference 1 requested each addressee in the Central and Eastern United States (CEUS) to submit a written response consistent with the requested seismic hazard evaluation information (items 1 through 7) by September 12, 2013. On February 15, 2013, the NRC issued Reference 2, endorsing the Reference 3 industry guidance for responding to Reference 1. Section 4 of Reference 3 identifies the detailed information to be included in the seismic hazard evaluation submittals.

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On April 9, 2013, NEI submitted Reference 4 to the NRC, requesting NRC agreement to delay submittal of some of the CEUS seismic hazard evaluation information so that an update to the EPRI (2004, 2006) ground motion attenuation model could be completed and used to develop that information. NEI proposed that descriptions of subsurface materials and properties and base case velocity profiles (items 3a and 3b in Section 4 of Reference 3) be submitted to the NRC by September 12, 2013, with the remaining seismic hazard and screening information submitted to NRC by March 31, 2014. In Reference 5, the NRC agreed with this recommendation.

The attachment to this letter contains the requested descriptions of subsurface materials and properties and base case velocity profiles for Seabrook Station. The information provided in the attachment to this letter is considered an interim product of seismic hazard development efforts being performed for the industry by EPRI. The complete and final seismic hazard report for Seabrook Station will be provided to the NRC in the NextEra Energy Seabrook March 31, 2014 seismic hazard submittal in accordance with Reference 5.

This letter contains no new regulatory commitments.

Should you have any questions concerning the content of this letter, please contact Mr. Michael H. Ossing, Licensing Manager, at (603) 773-7512.

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

Executed on 9/12, 2013.

Sincerely,



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

Enclosure

cc: NRC Region I Administrator
J.G. Lamb, NRC Project Manager, Project Directorate 1-2
NRC Senior Resident Inspector

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Enclosure

Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident – 1.5 Year Response for CEUS Sites

SUMMARY OF SITE GEOTECHNICAL PROPERTIES

(Reference UFSAR Table 2.5-13)

Seabrook Site Description

The basic information used to evaluate the site geologic profile at the Seabrook site is shown in Table 1, below. The basis for this profile information is the UFSAR Table 2.5-13. The site geologic profile indicates that hard rock (shear-wave velocity approximately 9000 ft/sec) underlies the site. As a result, the Seabrook site was treated as a hard-rock site and no site amplification factors were calculated for the site.

TABLE 1 - SUMMARY OF SITE GEOTECHNICAL PROPERTIES
(Reference UFSAR Table 2.5-13)

1. Material Description

- Quartz diorite and quartzite

2. Compression Wave Velocity

- Seismic Survey: 13,000 – 16,000 ft/sec
- Uphole and Crosshole Geophysical Tests: 16,500 – 18,500 ft/sec
- Laboratory Sonic Tests: 14,682 – 20,050 ft/sec

3. Shear Wave Velocity

- Uphole and Crosshole Geophysical Tests: 8,000 – 10,000 ft/sec

4. Bulk Density

- 164 - 188 lbs/ft³

5. Shear Modulus, G

Calculated from shear wave velocity ($G = \rho v_s^2$): 2.3 – 3.5 x 10⁶ lb/in²