



RS-15-290
RA-15-091

10 CFR 50.54(f)

December 4, 2015

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike,
Rockville, MD 20852

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: High Frequency Supplement to Seismic Hazard Screening Report, Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 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, Electric Power Research Institute Report 3002000704, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima 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)
3. NEI Letter, Final Draft of Industry Seismic Evaluation Guidance (EPRI 1025287), dated November 27, 2012 (ML12333A168 and ML12333A170)
4. NRC Letter, Endorsement of Electric Power Research Institute Final Draft Report 1025287, "Seismic Evaluation Guidance", dated February 15, 2013 (ML12319A074)
5. Exelon Generation Company, LLC letter to NRC, Seismic Hazard and Screening Report (CEUS Sites), Response to NRC Request for Information Pursuant to 10CFR50.54(f) Regarding Recommendation 2.1 of Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, dated March 31, 2014 (RS-14-070)
6. NRC Letter, Screening and Prioritization Results Regarding Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Seismic Hazard Re-evaluations for Recommendation 2.1 of the Near Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, dated May 9, 2014 (ML14111A147)

7. NRC Letter, Support Document for Screening and Prioritization Results Regarding Seismic Hazard Re-Evaluation for Operating Reactors in the Central and Eastern United States, dated May 21, 2014 (ML14136A126)
8. NEI Letter, Request for NRC Endorsement of High Frequency Program: Application Guidance for Functional Confirmation and Fragility Evaluation (EPRI 3002004396), dated July 30, 2015 (ML15223A100/ML15223A102)
9. NRC Letter, September 17, 2015 to NEI: Endorsement of Electric Power Research Institute Final Draft Report 3002004396: "High Frequency Program: Application Guidance for Functional Confirmation and Fragility" (ML15218A569)
10. NRC Letter, Final Determination of Licensee Seismic Probabilistic Risk Assessments Under the Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 2.1 "Seismic" of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident, dated October 27, 2015 (ML15194A015)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued a Request for Information per 10 CFR 50.54(f) (Reference 1) to all power reactor licensees. The required response section of Enclosure 1 of Reference 1 indicated that licensees should provide a Seismic Hazard Evaluation and Screening Report within 1.5 years from the date of the letter for Central and Eastern United States (CEUS) nuclear power plants. By NRC letter dated May 7, 2013 (Reference 2), the date to submit the report was extended to March 31, 2014.

By letter dated May 9, 2014 (Reference 6), the NRC transmitted the results of the screening and prioritization review of the seismic hazards reevaluation submittal for Oyster Creek Nuclear Generating Station (Reference 5). In accordance with the screening, prioritization, and implementation details report (SPID) (References 3 and 4), and Augmented Approach guidance (Reference 2), the reevaluated seismic hazard is used to determine if additional seismic risk evaluations are warranted for a plant. Specifically, the reevaluated horizontal ground motion response spectrum (GMRS) at the control point elevation is compared to the existing safe shutdown earthquake (SSE) or Individual Plant Examination for External Events (IPEEE) High Confidence of Low Probability of Failure (HCLPF) Spectrum (IHS) to determine if a plant is required to perform a high frequency confirmation evaluation. As noted in the May 9, 2014 letter from the NRC (Reference 6) on page 2 of Enclosure 2, Oyster Creek Nuclear Generating Station is to conduct a limited scope High Frequency Evaluation (Confirmation).

Within the May 9, 2014 letter (Reference 6), the NRC acknowledged that these limited scope evaluations will require additional development of the assessment process. By Reference 8, the Nuclear Energy Institute (NEI) submitted an Electric Power Research Institute (EPRI) report entitled, High Frequency Program: Application Guidance for Functional Confirmation and Fragility Evaluation (EPRI 3002004396) for NRC review and endorsement. NRC endorsement was provided by Reference 9. Reference 10 provided the NRC final seismic hazard evaluation screening determination results, and the associated schedules for submittal of the remaining seismic hazard evaluation activities. This submittal is provided in accordance with Reference 10, Table 1a, to address the High Frequency Evaluation information request for Oyster Creek Nuclear Generating Station.

The High Frequency Confirmation for Oyster Creek Nuclear Generating Station, provided in the attachment to this letter, shows that the GMRS exceedance area between the control point GMRS and SSE is "on the order of 10% or less" (Reference 8, Section 3.1.2) over the frequency range of exceedance. As such, the GMRS exceedances are consistent with the criteria identified in Section 3.1.2 of Reference 8. Therefore, no additional evaluation is necessary. The attachment to this letter provides the SSE and GMRS information from Reference 5.


This transmittal completes the scope of work described in Section 4.2 of Reference 5, for Oyster Creek Nuclear Generating Station.

This letter contains no new regulatory commitments and closes Commitment No. 2 contained in Reference 5 for Oyster Creek Nuclear Generating Station.

If you have any questions regarding this report, please contact Ronald Gaston at 630-657-3359.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 4th day of December 2015.

Respectfully submitted,



James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Oyster Creek Nuclear Generating Station GMRS and SSE Supporting Information

cc: Regional Administrator - NRC Region I
NRC Senior Resident Inspector – Oyster Creek Nuclear Generating Station
NRC Project Manager, NRR – Oyster Creek Nuclear Generating Station
Mr. Nicholas DiFrancesco, NRR/JLD/JHMB, NRC

Attachment

Oyster Creek Nuclear Generating Station
GMRS and SSE Supporting Information
(Reference 5)

(2 Pages)

**Table 1 – Oyster Creek Nuclear
Generating Station
SSE and GMRS Data**

SSE		GMRS	
Freq	Accel	Freq	Accel
(Hz)	(g)	(Hz)	(g)
0.5	0.03	0.1	1.84E-02
0.6	0.05	0.125	2.30E-02
0.7	0.06	0.15	2.77E-02
0.8	0.08	0.2	3.69E-02
0.9	0.09	0.25	4.61E-02
1	0.11	0.3	5.53E-02
1.25	0.15	0.35	6.45E-02
1.5	0.19	0.4	7.38E-02
2	0.27	0.5	9.22E-02
2.5	0.29	0.6	1.15E-01
3	0.36	0.7	1.28E-01
3.5	0.39	0.8	1.44E-01
4	0.41	0.9	1.58E-01
5	0.44	1	1.68E-01
6	0.43	1.25	1.96E-01
7	0.42	1.5	2.20E-01
8	0.39	2	2.56E-01
9	0.37	2.5	2.70E-01
10	0.36	3	2.96E-01
12.5	0.31	3.5	3.12E-01
15	0.26	4	3.20E-01
20	0.22	5	3.28E-01
25	0.20	6	3.11E-01
50	0.18	7	2.97E-01
100/PGA	0.18	8	2.86E-01
		9	2.75E-01
		10	2.66E-01
		12.5	2.48E-01
		15	2.35E-01
		20	2.25E-01
		25	2.22E-01
		30	2.13E-01
		35	2.06E-01
		40	2.01E-01
		50	1.94E-01
		60	1.88E-01
		70	1.84E-01
		80	1.80E-01
		90	1.77E-01
		100	1.74E-01

Figure 1

