

NRR-PMDAPEm Resource

From: MAUER, Andrew [anm@nei.org]
Sent: Wednesday, August 12, 2015 11:04 AM
To: Wyman, Stephen; DiFrancesco, Nicholas; Shams, Mohamed
Subject: [External_Sender] Draft HF Template for 12/2015 submittals
Attachments: High Frequency Template 8-11-15.docx

Attached is a draft HF template for December submittals. Comments within the next week would be appreciated.

Thanks,
Andrew

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Subject: [External_Sender] Draft HF Template for 12/2015 submittals
Sent Date: 8/12/2015 11:03:50 AM
Received Date: 8/12/2015 11:03:55 AM
From: MAUER, Andrew

Created By: anm@nei.org

Recipients:

"Wyman, Stephen" <Stephen.Wyman@nrc.gov>
Tracking Status: None
"DiFrancesco, Nicholas" <Nicholas.DiFrancesco@nrc.gov>
Tracking Status: None
"Shams, Mohamed" <Mohamed.Shams@nrc.gov>
Tracking Status: None

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High Frequency Template 8-11-15.docx		38517

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

- Yellow highlighted Red Text designate information to be filled in by Company/Licensee
- Blue brackets designate instructions
- All bracketed text should be removed prior to submission]

10 CFR 50.54(f)

December 31, 2015

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

Company/Licensee/SiteName
Company/Licensee/SiteDocket Number(s)
Company/Licensee/SiteRenewed License Number(s)

Subject: High Frequency Supplement to Seismic Hazard Screening Report, Response 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, ADAMS Accession Number 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, ADAMS Accession Number ML 13106A331
3. NEI Letter, Final Draft of Industry Seismic Evaluation Guidance (EPRI 1025287), dated November 27, 2012, ADAMS Accession Number ML12333A168 and ML12333A170
4. NRC Letter, Endorsement of Electric Power Research Institute Final Draft Report 1025287, "Seismic Evaluation Guidance", dated February 15, 2013, ADAMS Accession Number ML12319A074
5. [Company/Licensee Seismic Hazard Reevaluations submittal – March 31 2014 GMRS Submittal]
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 Reevaluations for Recommendation 2.1 of the Near-Term Task Force Reviews of Insights from the Fukushima Dai-ichi accident, dated May 9, 2014, ADAMS Accession Number ML14111A147[May replace with NRC re-screening letter]
7. NEI Letter, Request for NRC Endorsement of High Frequency Program: Application Guidance for Functional Confirmation and Fragility Evaluation (EPRI 3002004396), dated July 30, 2015, [ADAMS Accession Number MLXXXXXXXXXX]
8. NRC Letter, [NRC Endorsement Letter for EPRI 3002004396][PENDING, may consolidate with Reference 6]

Ladies and Gentlemen,

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued a Request for Information per 10CFR 50.54(f) (Reference 1) to all power reactor licensees. The required response section of Enclosure 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 [Company/Licensee/Site] (Reference 4). In accordance with the SPID and Augmented Approach guidance (References 2, 3 and 4), 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 IPEEE HCLPF Spectrum (IHS) to determine if a plant is required to perform a high frequency confirmation. As noted in the May 9, 2014 letter, [Company/Licensee/Site] is to conduct a limited scope High Frequency Confirmation. [Note: Some utilities may need to reference supplemental letters (i.e. Final Screening and Prioritization Letter) from the NRC which may have superseded the May 9, 2014 NRC letter requirements.]

Within the May 9, 2014 letter (Reference 6), NRC acknowledged that these limited scope evaluations will require additional development of the assessment process. By Reference 7, 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 8.

The High Frequency Confirmation for [Company/Licensee/Site], shows that the high-frequency spectral accelerations of the control point GMRS above 10Hz are within the limits identified in Section 3.1.1 of Reference 6 (less than or equal to 0.2g); therefore, no additional evaluation is necessary. The attachment to this letter provides the SSE (or IHS) and GMRS information from Reference 5.

[OR]

The High Frequency Confirmation for [Company/Licensee/Site], shows that the GMRS exceedance area between the control point GMRS and SSE (or IHS) is x% [Note: if exceedance >10%, include “, which is on the order of 10% of the area under the SSE (or IHS)”] over the frequency range of exceedance. As such, the GMRS exceedances are consistent with the criteria identified in Section 3.1.2 of Reference 7; therefore, no additional evaluation is necessary. The attachment to this letter provides the SSE (or IHS) and GMRS information from Reference 5 and the calculated exceedance area percentage.

This transmittal completes Commitment No. [#] from Reference 4. [Note: Some utilities did not make formal commitments in Reference 5 and some utilities did not number their commitments so for those utilities they can say – This transmittal completes the scope of work described in Section 4.2 of Reference 5.] This letter contains no new Regulatory Commitments and no revision to existing Regulatory Commitments.

Should you have any questions regarding this submittal, please contact
[Company/Licensee/Site contact and phone number]

I declare under penalty of perjury that the foregoing is true and correct. Executed on **[DATE]**.

Sincerely,

[Company/Licensee/Site Vice President]

Attachment:

GMRS and SSE Supporting Information

cc: *[Company/Licensee/Site specific distribution]*

Attachment
GMRS and SSE Supporting Information
(Reference 5)

Table 1 SSE and GMRS Data*

SSE		GMRS	
Freq	Accel	Freq	Accel
(Hz)	(g)	(Hz)	(g)
0.1	0.0113	0.1	1.04E-02
0.125	0.0177	0.125	1.30E-02
0.15	0.0254	0.15	1.56E-02
0.2	0.0452	0.2	2.09E-02
0.25	0.0707	0.25	2.61E-02
0.3	0.0821	0.3	3.13E-02
0.35	0.0932	0.35	3.65E-02
0.4	0.1041	0.4	4.17E-02
0.5	0.125	0.5	5.21E-02
0.6	0.1452	0.6	5.93E-02
0.7	0.1648	0.7	6.60E-02
0.8	0.184	0.8	7.00E-02
0.9	0.2027	0.9	7.37E-02
1	0.221	1	7.86E-02
1.25	0.2655	1.25	9.02E-02
1.5	0.3085	1.5	9.65E-02
2	0.3908	2	1.10E-01
2.5	0.4695	2.5	1.15E-01
3	0.4575	3	1.32E-01
3.5	0.4476	3.5	1.48E-01
4	0.4392	4	1.59E-01
5	0.4255	5	1.84E-01
6	0.4147	6	1.98E-01
7	0.4057	7	2.09E-01
8	0.3981	8	2.16E-01
9	0.3915	9	2.22E-01
10	0.3622	10	2.25E-01
12.5	0.3072	12.5	2.29E-01
15	0.2685	15	2.24E-01
20	0.2171	20	2.12E-01
25	0.1841	25	1.96E-01
30	0.1609	30	1.87E-01
33	0.15	35	1.73E-01
40	0.15	40	1.62E-01
50	0.15	50	1.36E-01
60	0.15	60	1.19E-01
70	0.15	70	1.13E-01
80	0.15	80	1.11E-01
90	0.15	90	1.10E-01
100	0.15	100	1.10E-01

* Data validated against Reference5

Figure 1

