

## NRR-PMDAPem Resource

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**From:** MAUER, Andrew <anm@nei.org>  
**Sent:** Thursday, March 10, 2016 9:55 AM  
**To:** DiFrancesco, Nicholas; Vega, Frankie  
**Cc:** Shams, Mohamed  
**Subject:** [External\_Sender] Draft NTTF 2.1 SFP Submittal Template  
**Attachments:** NTTF 2.1 - Seismic SFP evaluation for GMRS less 0.8g Template NRC.docx

Nick/Frankie,

Attached is the submittal template we intend to use for EPRI 3002007148. We look forward to any feedback you may have. Please let me know if you expect your review to go longer than two weeks.

Thanks,  
Andrew

Andrew N. Mauer  
Senior Project Manager  
Emergency Preparedness & Risk Assessment

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**Subject:** [External\_Sender] Draft NTTF 2.1 SFP Submittal Template  
**Sent Date:** 3/10/2016 9:54:49 AM  
**Received Date:** 3/10/2016 9:54:52 AM  
**From:** MAUER, Andrew

**Created By:** anm@nei.org

**Recipients:**

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

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<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>	
MESSAGE	2248	3/10/2016 9:54:52 AM	
NTTF 2.1 - Seismic SFP evaluation for GMRS less 0.8g Template		NRC.docx	34063

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10 CFR 50.4  
10 CFR 50.54(f)

[DATE]

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

Company/Licensee/Site Name  
Company/Licensee/Site Docket Number(s)  
Company/Licensee/Site Renewed License Number(s)

**Subject:** Spent Fuel Pool Evaluation Supplemental 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 ADAMS Accession Number ML12053A340
2. 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, ADAMS Accession Number ML15194A015
3. NEI Letter, transmits EPRI 3002007148 for NRC endorsement, dated 2/23/2016, ADAMS Accession Number MLxxxxxxxx
4. EPRI 3002007148, Seismic Evaluation Guidance Spent Fuel Pool Integrity Evaluation, dated February 2016
5. NRC Letter, provides endorsement of EPRI 3002007148, dated MM/DD/YYYY, ADAMS Accession Number MLxxxxxxxx
6. [Company/Licensee Seismic Hazard Reevaluations submittal and any supplements]
7. [NRC Letter, Company/Licensee/Site Staff Assessment of Information provided Pursuant to Title 10 of the Code of Federal Regulations Part 50, Section 50.54(f), Seismic Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima DAI-ICHI Accident, dated [DATE], ADAMS Accession Number MLxxxxxxxx]

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. By letter dated October 27, 2015 (Reference 2), the NRC transmitted final seismic information request tables which identified that [Company/Licensee/Site] is to conduct a limited scope Spent Fuel Pool

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Evaluation. By Reference 3, Nuclear Energy Institute (NEI) submitted an Electric Power Research Institute (EPRI) report entitled, Seismic Evaluation Guidance Spent Fuel Pool Integrity Evaluation (EPRI 3002007148) (Reference 4) for NRC review and endorsement. NRC endorsement was provided by Reference 5.

EPRI 3002007148 provides criteria for evaluating the seismic adequacy of a spent fuel pool (SFP). Section 3.3 of EPRI 3002007148 lists the parameters to be verified to confirm that the results of the report are applicable to [Company/Licensee/Site], and that the [Plant] SFP is seismically adequate in accordance with NTTF 2.1 Seismic evaluation criteria.

The attachment to this letter provides the data for [Plant] that confirms applicability of the EPRI 3002007148 criteria and confirms that the SFP is seismically adequate in accordance with NTTF 2.1 Seismic evaluation criteria.

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: Site-Specific Spent Fuel Pool Criteria for [Plant]

cc: [Company/Licensee/Site specific distribution]

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## ATTACHMENT

Company/Licensee

Plant/Site Name

Company/Licensee/Site Docket Number(s)

Company/Licensee/Site Renewed License Number(s)

Site-Specific Spent Fuel Pool Criteria for [Plant]

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The table below lists the criteria from Section 3.3 of EPRI 3002007148 along with data for [Plant] that confirms applicability of the EPRI 3002007148 criteria and confirms that the SFP is seismically adequate in accordance with NTF 2.1 Seismic evaluation criteria.

SFP Criteria from EPRI 3002007148	Site-Specific Data
<b>Site Parameters</b>	
1. The site-specific GMRS peak spectral acceleration at any frequency should be less than or equal to 0.8g.	The GMRS peak spectral acceleration in [site-specific GMRS submittal (Reference 6)] as accepted by the NRC in [NRC site-specific response letter (Reference 7)] is 0.xxg, which is ≤ 0.8g, therefore, this criterion is met.
<b>Structural Parameters</b>	
2. The structure housing the SFP should be designed using an SSE with a peak ground acceleration (PGA) of at least 0.1g.	The SFP is housed in the [reactor/fuel building], which is seismically designed to the site SSE with a PGA of [0.xxg]. The [plant] PGA is greater than 0.1g, therefore, this criterion is met.
3. The structural load path to the SFP should consist of some combination of reinforced concrete shear wall elements, reinforced concrete frame elements, post-tensioned concrete elements and/or structural steel frame elements.	The structural load path from the foundation to the SFP consists of [briefly describe structural load path], therefore, this criterion is met for [plant].
4. The SFP structure should be included in the Civil Inspection Program performed in accordance with Maintenance Rule.	The SFP structure is included in the [plant] Civil Inspection Program in accordance with [Provide site-specific reference such as the implementing Directive or NRC submittal describing the plant Civil Inspection Program], therefore, this criterion is met for [plant].
<b>Non-Structural Parameters</b>	
5. To confirm applicability of the piping evaluation in Section 3.2 of EPRI 3002007148, piping attached to the SFP up to the first valve should have been evaluated for the SSE.	Piping attached to the SFP is evaluated to the SSE in accordance with [or as documented in ... site-specific reference], therefore, this criterion is met for [plant].

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SFP Criteria from EPRI 3002007148	Site-Specific Data
<p>6. Anti-siphoning devices should be installed on any piping that could lead to siphoning water from the SFP. In addition, for any cases where active anti-siphoning devices are attached to 2-inch or smaller piping and have extremely large extended operators, the valves should be walked down to confirm adequate lateral support.</p>	<p><i>[Briefly describe the use of anti-siphoning devices on piping systems that could lead to syphoning inventory from the SFP ].</i></p> <p>As described, no anti-siphoning devices can lead to siphoning, therefore, this criterion is met for <b>[plant]</b>.</p> <p><i>[If any active anti-siphoning devices are attached to 2-inch or smaller piping and have extremely large extended operators, evaluate their adequacy in accordance with NP-6041, Table 2-4]</i></p> <p>As described, no anti-siphoning devices are attached to 2-inch or smaller piping with extremely large extended operators, therefore, this criterion is met for <b>[plant]</b>.</p>
<p>7. To confirm applicability of the sloshing evaluation in Section 3.2 of EPRI 3002007148, the maximum SFP horizontal dimension (length or width) should be less than 125 ft, the SFP depth should be greater than 36 ft, and the GMRS peak Sa should be &lt;0.1g at frequencies equal to or less than 0.3 Hz.</p>	<p>The <b>[plant]</b> SFP has a length of <b>[xx ft]</b>, a width of <b>[xx ft]</b> and a depth of <b>[xx ft]</b> based on <b>[plant UFSAR or reference drawings]</b>, therefore, this criterion is met.</p> <p>The <b>[plant]</b> GMRS maximum spectral acceleration in the frequency range less than 0.3 Hz is <b>[0.xx g]</b> from <b>[site-specific GMRS submittal]</b> which is less than 0.1g, therefore, this criterion is met.</p>
<p>8. To confirm applicability of the evaporation loss evaluation in Section 3.2 of EPRI 3002007148, the SFP surface area should be greater than 500 ft<sup>2</sup> and the licensed reactor core thermal power should be less than 4,000 MWt per unit.</p>	<p>The surface area of the <b>[plant]</b> SFP is <b>[xxxx ft<sup>2</sup>]</b>, which is greater than 500 ft<sup>2</sup>; and licensed reactor thermal power for <b>[plant]</b> is <b>[xxxx]</b> MWt per unit which is less than 4,000 MWt per unit, therefore, these criteria are met.</p>