

August 5, 2015

MEMORANDUM TO: Mohamed K. Shams, Chief  
Hazards Management Branch  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

FROM: Frankie G. Vega, Project Manager */RA/*  
Hazards Management Branch  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JULY 15, 2015, CATEGORY 2 PUBLIC MEETING  
WITH THE NUCLEAR ENERGY INSTITUTE TO DISCUSS SEISMIC  
HAZARD REEVALUATIONS ASSOCIATED WITH IMPLEMENTATION  
OF NEAR-TERM TASK FORCE RECOMMENDATION 2.1: SEISMIC

On July 15, 2015<sup>1</sup>, the U. S. Nuclear Regulatory Commission (NRC) staff held a Category 2 public meeting with the Nuclear Energy Institute (NEI) at NRC Headquarters, Three White Flint North, 11601 Landsdown Street, Rockville, Maryland. The purpose of this meeting was to discuss the overall status and schedules related to the seismic hazard reevaluations associated with NRC request for information issued pursuant to Title 10 to the *Code of Federal Regulations* Part 50, Section 50.54(f) (hereafter referred to as the 50.54(f) letter<sup>2</sup>).

During the meeting the NRC staff provided the status of the seismic probabilistic risk assessment (SPRA) screening. The NRC staff also provided feedback on its review of the NEI's high frequency implementation guidance<sup>3</sup>. Electric Power Research Institute (EPRI) and NEI representatives provided a suggestion for a near term schedule for the completion and implementation of the high frequency (HF) guidance<sup>4</sup> and provided the status of the proposed approaches for the spent fuel pool (SFP) evaluation<sup>5</sup>, which included a draft white paper documenting the seismic review of SFP structures at low and moderate ground motion

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<sup>1</sup>The meeting notice is available via the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML15173A280.

<sup>2</sup> The 50.54(f) letter and Enclosure 1 are available via ADAMS under Accession Nos. ML12053A340 and ML12056A047, respectively.

<sup>3</sup> The NRC's slide presentation (including status SPRA Reassessment and high frequency review) is available via ADAMS under Accession No. ML15197A009.

<sup>4</sup> The EPRI High frequency application guidance near-term schedule slide presentation is available under ADAMS Accession No. ML15197A004.

<sup>5</sup> The NEI's slide presentation on SFP evaluation updates is available via ADAMS under Accession No. ML15197A008.

response spectra (GMRS) sites<sup>6</sup>. The NEI representatives also provided an overview of Appendix H to NEI 12-06<sup>7</sup>.

The NRC staff and NEI representatives' discussions included the following meeting highlights:

Discussion related to NRC approach to support SPRA Additional Considerations

1. The NRC staff stated that it's currently engaged in discussions with several licensees in relation to their plans to provide supplemental information, as discussed in the May 21, 2015, public meeting<sup>8</sup>, to support the staff's SPRA reassessment decisions. The NRC staff emphasized that this information is expected from licensees no later than July 31, 2015.
2. The NRC staff stated it will review additional insights provided by licensees and will document its rationale for deciding whether a SPRA is necessary in a letter expected to be issued late August or early September 2015.

Discussion related to the development of Appendix H to NEI 12-06 to address proposed rule on mitigation of beyond-design-basis events

1. The NEI representatives provided details of the five proposed alternative paths licensees could follow, depending on a comparison of the GMRS and safe shutdown earthquake (SSE), to support the proposed rulemaking. The NEI provided a description of each path and proposed completion schedules related to both, the resolution 50.54 (f) and mitigation strategies related activities.
2. The NEI representatives stated that it expects to have a formal draft of Appendix H for NRC review by August 2015.

Discussion related to SFP Evaluation Approach

1. The NEI and EPRI representatives provided updates to the structural portion of the SFP evaluation. Specifically for low and moderate GMRS sites, NEI and EPRI representatives presented a draft white paper documenting the proposed seismic review of SFP structures. The NEI and EPRI representatives stated that this process is not final and requested the NRC's feedback.
2. The NEI and EPRI representatives provided an overview of the non-structural review for low and moderate GMRS sites. The EPRI representatives stated that non – structural SFP Screening, Prioritization and Implementation Details (SPID) considerations will be considered in the SFP seismic review white paper. These considerations include penetrations, siphoning, sloshing and evaporative losses.

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<sup>6</sup> The draft white paper is available via ADAMS under Accession No. ML15197A005.

<sup>7</sup> Overview of Appendix H to NEI 12-06 is available via ADAMS under Accession No. ML15197A006.

<sup>8</sup> The May 21, 2015, public meeting summary is available via ADAMS under Accession No. ML15147A677.

3. The staff noted that SFP considerations should be combined when more than one could be expected, such as sloshing and evaporative losses.
4. The SFP evaluations for low and moderate GMRS sites are expected before the end of 2016.
5. The EPRI representatives provided details on the proposed Phase 2 of the SFP evaluations. Phase 2 addresses the structural and non-structural review of SFPs for high GMRS sites. The EPRI representatives stated that these reviews will take longer than those for low GMRS sites since input from SPRA might be needed. Guidance is currently under development and details will be shared with the staff in future public meetings.

Discussion related to the near term schedule for the development of the HF implementation guidance:

1. The NEI representatives proposed key dates for the completion of the HF guidance and implementation of the HF confirmation.
2. The NEI representatives stated that licensees with minimal exceedances (<10 percent) are expected to submit their HF confirmations by the end of 2015. Those licensees with higher exceedances (>10 percent) are expected to submit their HF confirmation by the end of 2016. Because licensees will be allocated into two groups, depending on their exceedances, it is expected that two different submittal templates be developed. The NRC and NEI will continue to discuss the development of these submittal templates.

No regulatory decisions or commitments were made during the meeting. The public was invited to observe the meeting and was given several opportunities to communicate with the NRC during the public meeting and before adjourning. The NRC staff received several public comments, which were addressed during the meeting and no meeting feedback forms were received.

Enclosure:  
List of Attendees

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**ADAMS Accession No.: ML15208A039**

\*concurrence via e-mail

OFFICE	NRR/JLD/JHMB/PM	NRR/JLD/LA	NRO/DSEA/RGS/BC
NAME	FVega	SLent	DJackson
DATE	07/28/15	07/28/15	07/31/15
OFFICE	NRR/JLD/JHMB/BC	NRR/JLD/JHMB/PM	
NAME	MShams	FVega	
DATE	08/05/15	08/05/15	

**OFFICIAL RECORD COPY**

List of Attendees

U.S. Nuclear Regulatory Commission  
Public Meeting with the Nuclear Energy Institute  
Concerning Seismic Hazard Reevaluations  
Japan Lessons-Learned Near-Term Task Force Recommendation 2.1: Seismic

July 15, 2015

<b>Attendees</b>				
<b>Name</b>	<b>Organization</b>		<b>Name</b>	<b>Organization</b>
John Wu	NRC/NRO		Jana Bergman	Curtis-Wright/Scientech
Michael Tschultz	NEI		Tim Lupold	NRC/NRR
Andrew Mauer	NEI		Nilesh Chokshi	NRC/NRO
Greg Hardy	SGH		Richard Drake	Entergy
Bret Tegeler	ERIN Engineering		Robert Keiser	Duke Energy
John Richards	EPRI		Steve Jones	NRC/NRR
Andrea Kock	NRC/NRO		Penny Selman	TVA
Divakar Bhargava	Dominion		Steve Wyman	NRC/JLD
Diane Jackson	NRC/NRO		Zuhan Xi	NRC/NRO
Brittain Hill	NRC/NRO		Frankie Vega	NRC/NRR
Nicholas DiFrancesco	NRC/NRR		Mohamed Shams	NRC/NRR
Jose Pires	NRC/RES		Bob Fitzpatrick	NRC/NRR
Kamal Manoly	NRC/NRR		Melanie Brown	Southern Nuclear
Justin Huber	TVA		Ram Srinivasan	TVA (consultant)
Stacy Rosenberg	NRC/NRR		Daniel Vasquez	Dominion
Marc Hotchkiss	Dominion		(continues to next page)	

**Abbreviations:**

EPRI - Electric Power Research Institute  
NEI – Nuclear Energy Institute  
NRO – Office of New Reactors  
NRR – Office of Nuclear Reactor Regulation  
RES – Office of Nuclear Regulatory Research  
SGH – Simpson, Gumpertz and Heger  
TVA – Tennessee Valley Authority  
WCNOC – Wolf Creek Nuclear Operating Company

Enclosure

Webinar Attendees

First Name	Last Name	Organization
Jose	Blanco	Rizzo assoc
Steven	Laur	NRC
Dan	Madden	Dominion
Marvin	Lewis	
Frank	Higgins	Exelon
Jorma	Arros	ABS consulting
Michael	Marshall	NRC
Robert	Kassawara	EPRI
Lauren	Gibson	NRC
On	Yee	NRC
Barry	Sloane	ERIN
Robert	Budnitz	LBL
Arun	Pal	Exelon
Wing	Ho	Exelon
Roger	Gish	TVA
Allan	Haeger	Certrec
Tim	Solberg	WCNOC
Donald	Moore	Bellsouth
Donnie	Harrison	NRC
Farzin	Beigi	ABS consulting.
Brenda	Kovarik	AEP
Whitney	Hemingway	DTE energy
Robert	Meyer	
Steve	Sheahan	Energy Northwest
William	Kelly	
Kimberly	Keithline	MPR
Calin	Eftimie	
Barbara	Owens	Entergy
Thomas	John	Dominion
Jeffrey	Clark	Exelon
Richard	Rogalski	Energy Northwest
Richard	Rogalski	Energy Northwest
Charlotte	Geiger	PSEG
Joshua	Reinert	Areva
John	Traynor	Exelon
Dale	Wuokko	Toshiba
Philip	Tarpinian	Exelon