UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 17, 2012

MEMORANDUM TO: Robert J. Pascarelli, Chief
Projects Management Branch
Japan Lessons-Learned Project Directorate
Office of Nuclear Reactor Regulation

FROM: Christopher Gratton, Sr. Project Manager
Projects Management Branch
Japan Lessons-Learned Project Directorate
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JUNE 14, 2012, PUBLIC MEETING REGARDING SEISMIC REEVALUATION INFORMATION REQUEST

On June 14, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting[1] with the Nuclear Energy Institute (NEI) and industry representatives, including the Electric Power Research Institute (EPRI), to review and assess the recommendations in the *Near-Term Task Force* (NTTF) *Recommendations for Enhancing Reactor Safety in the 21st Century* report, issued July 12, 2011[2]. The meeting focused on NTTF Recommendation 2.1, the reevaluation of seismic hazards, which is part of the Tier 1 recommendations under consideration for implementation without unnecessary delay. During this meeting, the participants discussed development of the guidance document to support the screening and prioritization of seismic hazard and risk evaluations.

The list of attendees that participated is enclosed. Presentation material can be found under Agencywide Documents Access and Management System (ADAMS) Accession No. ML12151A315.

The meeting discussions centered on the progress made on the 11 topics discussed since the last public meeting on Recommendation 2.1 for seismic on May 15-16, 2012.

Topic 1 relates to the review and update of the 2004/2006 EPRI attenuation model. A project plan was issued on June 14, 2012, and was not available to review before this public meeting. The NRC staff stated that updates to the model should not include replacement of the model. Major changes to the model, such as changes in the reference rock, would also be problematic. Industry participants indicated that the 2004/2006 EPRI attenuation model would be used if it is determined that an updated model was no longer needed, or if the development of the updated model could not meet the required schedule.

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[1] The meeting notice is available via the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML12151A317.
[2] The NTTF report is available under ADAMS Accession No. ML111861807.

Topic 2 relates to the use of existing site condition information. EPRI staff stated they would include an example of how the site-response approach works for a site with limited information. NRC requested that the industry include two examples: (1) one with soil, and (2) one with soft rock. NRC staff committed to provide EPRI and NEI, within a week of this meeting, a description of what the NRC staff would like to receive regarding site response comparisons.

In addition, the meeting participants agreed that by mid-July 2012, the industry would submit interim guidance addressing control point and site response specifics. The NRC staff agreed to review the information provided and endorse the industry position, if appropriate. This action is needed to address concerns by the industry about meeting the required response schedule specified in the NRC request for information (RFI) letter dated March 12, 2012.

Topic 3 relates to the use of existing structural models for new seismic response analysis. NEI provided draft criteria for assessment of structural models, including examples. The NRC staff will review the examples provided by the industry and discuss the draft criteria with the staff and its consultants. The NRC staff expects to have feedback for the industry at the next public meeting. The NRC staff requested that the industry consider including examples of models that are acceptable, and those that are not.

Topic 4 relates to scaling of in-structure response spectra based on previous analysis. Industry is working on examples to include in the guidance. NRC requested that industry prepare clear examples of what are clearly similar spectra and what are clearly not similar spectra, for the next public meeting in July 2012.

Topic 5 relates to screening criteria for structures, systems, and components (SSCs) that will be included in the seismic probabilistic risk assessment and seismic margins analysis (SPRA/SMA) systems analysis models. NRC was concerned that SSCs that were screened out would be removed from event sequence logic. It was clarified that none of the SSCs would actually be removed from the model in either the event trees or the fault trees. The industry noted that screening is limited to eliminating the effort to determine the fragility of rugged components, as a result the capacity of these SSCs will be set to the screening level. NEI indicated that they will present information from the sensitivity study in a public meeting late July/early August.

Topic 6 is relates to the use of individual plant examination for external events (IPEEE) and high confidence in low probability of failure (HCLPF) spectrum for screening the plants. The meeting participants reiterated the importance of devising an acceptable screening tool based on IPEEE/HCLPF information. NRC staff committed to have IPEEE quality criteria available for discussion during the next public meeting in July. Industry representative indicated that they would provide a HCLPF-based process for discussion at the July public meeting.

Topic 7 is relates to the treatment of high frequency response and high frequency capacity. The participants discussed the details of a high frequency testing program that will provide information to support potential staff actions, and the 2-phase approach to continue with developing the guidance document, while conducting the high frequency research program. The industry is organizing a workshop in July 2012, to discuss the initial testing program and project plan. The project plan for the test program is expected to be issued in August 2012. The NRC staff understands that the high frequency test program will not be completed before the Screening, Prioritization, and Implementation Details (SPID) guidance document is issued in

November 2012. The NRC staff committed to providing the industry with feedback on EPRI reports 1015808 and 1015809 (equipment list and testing wave form) as soon as practical to support the development of the project plan.

Topic 8 relates to the use of either Conservative Deterministic Failure Margin method (hybrid approach) or the separation of variables method to develop fragilities. The meeting participants discussed requiring a generic beta of 0.35, rather than leaving it undefined. The NRC staff agreed that a study was not needed. The NRC staff will consider whether to do separation of variables for the dominant contributors, and consider how we would use the information related to confidence bands prior to the next public meeting in July.

Topic 9 relates to the approach for spent fuel pool (SFP) evaluations. Meeting participants discussed the scope of this portion of the reevaluation. NEI is considering options for completing the SFP evaluations, such as doing a generic study for typical SFP designs. The NRC staff reiterated that the scope of the review is defined by the RFI issued March 12, 2012, and that any deviations would need to be proposed expeditiously.

Topic 10 relates to invoking requirements from the American Society of Mechanical Engineers/American Nuclear Society probabilistic risk analysis standard and Regulatory Guide 1.200 that are consistent with the nature of this application in performing an SPRA or SMA. The participants agreed to review and compare the SPID guidance against the standard (and to note deviations from the standard by end of July 2012. In addition, the participants also agreed to define what exceptions to Category II are.

Topic 11 relates to the consideration of rock founded structures for developing an in-structure floor response spectra. Industry representatives discussed two examples that being developed, with the results targeted for August 2012.

The NRC staff also indicated that high-level concepts for the content of the interim staff guidance (ISG) related to the NRC SMA will be discussed at the upcoming July public meeting. The staff plans to issue the NRC SMA ISG in August 2012, for public comment.

Finally, the industry proposed a table of contents for the SPID guidance document. The NRC staff stated that they will review the scope and breadth of the document and provide feedback to the industry at the next public meeting in July 2012. The target date to complete the draft SPID guidance document is October 2012.

Members of the public participated in the webinar and asked clarifying questions throughout the meeting. No regulatory decisions were made as a result of this meeting.

Enclosures:
As stated

NRC Meeting with Stakeholders
Development of Guidance
NTTF Recommendation 2.1 Seismic

Thurs June 14, 2012
Webinar

Name	Organization	Phone Number
Christopher Gratton	NRC/Japan Lessons Learned Project Directorate	(301) 415-1055
Kimberly Keithline	NEI	202-739-8121
BOB WHORTON	SCE+G / SCANA	(803) 345-4725
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Bob Kennedy	Struct. Mech. Consulting	760.751-3510
Greg Hardy	Simpson Gumpertz & Heger	714-381-0312
JON AKE	NRC/RES	301-251-7626
Cliff Munson	NRC/NRO	301-415-6947
ANNE KAMMERER	NRC/RES	301-973-3923
Pei-Ying Chen	NRC/NRO	301-415-2789
M.K. Ravindra	NRC Consultant	714-323-6972
N.C. Chokshi	NRC/NRO	301-415-1634
BOB KASSAWARA	EPRI	650 855-2302
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ENCLOSURE

Sign In Sheet

Discussion of 2.1 Seismic

DATE: June 14, 2012

Name	Organization
James Shea	USNRC
Joseph Fray	MLB
Jessica Krafchmar	JLD
Ed Miller	JLD
Jana Beraman *	Scientech
Benjamin Kosbab *	Enercon
~~Joseph Fray~~	

* Participated via webinar

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