

June 18, 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 MAY 21, 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 May 21, 2015¹, 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 the implementation of Near-Term Task Force Recommendation 2.1: Seismic of the March 12, 2012, 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) letter²).

During the meeting the NRC staff discussed the evaluation approach it plans to follow to support potential seismic probabilistic risk assessment (SPRA) relief for some group 2 and 3 plants. The NRC staff also provided an overview of the preliminary approach it has considered in order to develop guidance to address the proposed rule on mitigation of beyond design-basis events incorporating the reevaluated seismic hazard³. Electric Power Research Institute (EPRI) and NEI representatives provided updates on the high frequency (HF) application guidance⁴ and provided the status of the proposed approaches for the spent fuel pool (SFP) evaluation⁵.

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301-415-1617

¹The meeting notice is available via the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML15139A339.

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

³The NRC's slide presentation (including SPRA relief and guidance development for proposed rulemaking) is available via ADAMS under Accession No. ML15140A628.

⁴The EPRI High frequency application guidance slide presentation is available under ADAMS Accession No. ML15140A648.

⁵The NEI's slide presentation on SFP evaluation updates is available via ADAMS under Accession No. ML15140A674.

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

Discussion related to NRC approach to support potential SPRA relief for some Group 2 and 3 plants

1. The NRC provided an overview of the approach it plans to follow when making the determination of which Group 2 and 3 plants would be granted an SPRA relief. Specifically, the staff mentioned it would rely on existing information provide as part of the R2.1 Seismic review effort including the expedited seismic evaluation process reports, seismic hazard exceedance (e.g. peak and area above the safe-shutdown earthquake), consideration of interim actions licenses have completed, GI-199 insights including the R2.1 hazard information, and reactor design details to make the determination. Licensees were requested to identify if additional criteria should be considered in the evaluation approach as part of the next public meeting.
2. The staff emphasized that the approach is preliminary and it continues to develop input and assess decisions. At this time, the staff also expects that those plants that are granted SPRA relief would perform the limited scope evaluations (i.e. spent fuel pool, HF evaluation, low frequency evaluation).
3. The staff clarified that it intends to issue a letter to those Group 2 and 3 plants that have been granted SPRA relief by late summer 2015.

Discussion related to guidance development to address proposed rule on mitigation of beyond design-basis events

1. The NRC staff provided an overview and scope of the proposed rule on mitigation of beyond design-basis events (MBDBE) as it relates to incorporating the reevaluated seismic hazard. Specifically, the staff provided details on the approach it plans to follow to support the proposed rulemaking, which includes the development of guidance to address scope and performance requirements. Draft Regulatory Guide (DG-1301) is available in ADAMS under Accession No. ML13168A031 (June 2015).
2. The NEI representatives and staff engaged in discussions regarding how to define "reasonable protection". The NRC and NEI agreed that this term should be better defined when addressing the proposed rulemaking.
3. The NEI representatives pointed out the importance of the insights gained from SPRAs and how these will be helpful when addressing the rule. The NRC staff acknowledged it will consider SPRAs, as appropriate, when developing the rulemaking guidance.

Discussion related to SFP Evaluation Approach

1. The NEI/EPRI representatives provided a presentation with updates to the structural portion of the SFP evaluation. The EPRI representatives provided details of a two - phase approach it plans to follow when evaluating the seismic adequacy of SFPs. This two - phase approach was develop to address lower ground motion response spectra

(GMRS) plants (peak spectral acceleration < 0.8g) separate from higher GMRS plants. The EPRI representatives provided an overview of the approach and stated that a white paper is in development to demonstrate adequacy of the proposed approach. The NRC staff encouraged EPRI to move forward with the development of the white paper as soon as possible.

2. In order to understand the range of SFP designs in the current plant fleet, EPRI representatives indicated that they conducted an industry survey which they plan to use to develop the parameters for their SFP assessment approach. EPRI representatives were confident that the information gained from this survey will support the ongoing Rec. 2.1 SFP evaluations for structural and non-structural review aspects.
3. EPRI representatives clarified that in addition to the structural evaluation presented in the slide presentation, the industry still plans to address the SPID criteria as it relates to non-structural considerations of SFPs.
4. The EPRI representatives were encouraged by the NRC to move forward with the proposed phased approach. The NRC and NEI/EPRI representatives agreed to discuss proposed schedules, in the near future, for the completion of both phases.

Discussion related to the HF implementation guidance:

1. The EPRI representatives discussed updates transmitted to the staff via email dated May 14, 2015 (ADAMS Accession No. ML15135A127) and email dated April 28, 2015 (ADAMS No. Accession ML15152A303). These updates to the HF implementation guidance were provided based on feedback the NRC staff provided as part of the March 31, 2015, public meeting (ADAMS Accession No. ML15111A019).
2. The NRC staff provided feedback on the new HF implementation guidance Sections 4.6 and 4.7 and stated it will further review the May 14, 2015 updates and will provide additional comments to NEI/EPRI. NRC comments on Sections 4.6 and 4.7 were provided to NEI by email dated June 3, 2015 (ADAMS No. Accession ML15154B166).
3. The staff emphasized the importance of Section 4.7 "Table on Contents". The NRC staff stated that sufficient information should be provided as part of the report to facilitate staff's review and reduce the number of follow-up questions. Specifically, the staff conveyed to EPRI the following information that should be included as part of the report: Description of the actual GMRS used by licensees in their evaluations, assurance that modifications will be performed in a timely manner and controlled with Regulatory Commitments, clear component descriptions and information on the operator actions.

M. Shams

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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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Enclosure:
List of Attendees

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*concurrence via e-mail

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| OFFICE | NRR/JLD/JHMB/PM | NRR/JLD/LA | NRO/DSEA/RGS/BC |
| NAME | FVega | SLent | DJackson |
| DATE | 05/28/15 | 05/28/15 | 05/29/15 |
| OFFICE | NRR/JLD/JHMB/BC | NRR/JLD/JHMB/PM | |
| NAME | MShams | FVega | |
| DATE | 06/18/15 | 06/18/15 | |

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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

May 21, 2015

| Attendees | | | | |
|----------------------|---------------------|--|--------------------------|---------------------|
| Name | Organization | | Name | Organization |
| Donald Moore | Southern Nuclear | | Eric Oesterle | NRC/NRR |
| Michael Tschultz | NEI | | Tim Reed | NRC/NRR |
| Andrew Mauer | NEI | | Nilesh Chokshi | NRC/NRO |
| Greg Hardy | SGH | | Greg Robison | Duke Energy |
| Bret Tegeler | ERIN Engineering | | Robert Keiser | Duke Energy |
| John Richards | EPRI | | William Webster | Dominion |
| Andrea Kock | NRC/NRO | | Penny Selman | TVA |
| Donnie Harrison | NRC/NRO | | 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 | | Yong Li | NRC/NRR |
| Kamal Manoly | NRC/NRR | | (continues to next page) | |

Abbreviations:

EPRI - Electric Power Research Institute
DSRA – Division of Safety Systems and Risk Assessment
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

Enclosure

Webinar Attendees

| First Name | Last Name | Organization |
|-------------------|------------------|-------------------------|
| Natalie | Doulgerakis | Enercon |
| Robin | McGuire | Lettis |
| Donald | Fox | Areva |
| Kelvin | Merz | SGH |
| Joshua | Reinert | Areva |
| Ogden | Sawyer | Areva |
| Roger | Gish | TVA |
| C | Ng | NRC |
| Gabriel | Toro | Lettis |
| Daniel | Madden | Dominion |
| Iatischa | hanson | NRC |
| Andrea | Maioli | Westinghouse |
| Benjamin | Kosbab | SC solutions |
| Dan | Jacobsen | Entergy |
| Scott | Martin | Entergy |
| Whitney | Hemingway | DTE energy |
| Michael | Terrell | Areva |
| Sheldon | Walters | Exelon |
| Tuan | Le | NRC |
| Philip | Tarpinian | Exelon |
| Frank | Higgins | Exelon |
| Al | Haeger | Certrec |
| Daniel | Vasquez | Dominion |
| Marc | Hotchkiss | Dominion |
| Todd | Swoyer | pplweb |
| On | Yee | NRC |
| Ian | Tseng | NRC |
| Kiang | Zee | ERIN eng |
| David | Calhoun | |
| Barry | Sloane | ERIN eng |
| Rick | Rohrer | XE nuclear |
| Brenda | Kovarik | American Electric Power |
| Kevin | Roche | NRC |
| Thomas | Roche | ABS consulting |

| First Name | Last Name | Organization |
|-------------------|------------------|--------------------------------|
| Chikako | Ogura | Toshiba |
| Douglas | Rapp (FENOC) | First Energy |
| Lawrence | Mangan (FENOC) | First Energy |
| John | MacCrimmon | Dominion |
| Nicholas | DiFrancesco | NRC |
| Steven | Laur | NRC |
| Dale | Wuokko | Toshiba |
| Annie | Kammerer | Bechtel |
| Nozar | Jahangir | PGE |
| ROBERT | BUDNITZ | Lawrence Berkley Laboratory |
| Wing | Ho | Exelon |
| John | McIntyre | Duke-energy |
| Richard | Rogalski | Energy Northwest |
| richard | drake | Entergy |
| Ram | Srinivasan | |
| Barbara | Owens | Entergy |
| Charlotte | Geiger | PSEG |
| Steve | Sheahan | Energy Northwest |
| Derek | Helmick | Nebraska Public Power District |
| Doug | True | Erin eng |
| Jeffrey | Clark | Exelon |
| Justin | Huber | TVA |