

April 20, 2016

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

FROM: Joseph M. Sebrosky, Senior Project Manager */RA/*
Hazards Management Branch
Japan Lessons-Learned Division
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SUBJECT: SUMMARY OF APRIL 5, 2016, PUBLIC MEETING
TO DISCUSS NUCLEAR REGULATORY COMMISSION
STAFF'S PRELIMINARY ASSESSMENT OF FUKUSHIMA
LESSONS LEARNED RELATED TO EVALUATION OF
NATURAL HAZARDS OTHER THAN SEISMIC AND FLOODING

On April 5, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16095A311), the U.S. Nuclear Regulatory Commission (NRC) staff held a Category 3 public meeting to discuss the NRC staff's preliminary assessment of a post-Fukushima recommendation related to the evaluation of natural hazards other than seismic and flooding. The staff's initial assessment of this recommendation was provided as Enclosures 1 of SECY-15-0137, "Proposed Plans for Resolving Open Fukushima Tier 2 and 3 Recommendations" (ADAMS Accession No. ML15254A006). As part of the meeting notice the NRC staff issued a "white paper" providing the NRC staff's updated assessment of the issue (ADAMS Accession No. ML16039A054). The meeting provided an overview of the assessment and included comment periods for stakeholders to ask questions or provide comments. The NRC staff also provided an email account so that interested stakeholders could provide comments on the white paper through April 12, 2016, that the NRC staff will consider the comments as it updates the assessment. A list of individuals in attendance at the meeting can be found as an enclosure to this summary. The NRC meeting handouts are available in ADAMS under Accession No. ML16095A160.

Highlights of Meeting

During the meeting the staff provided an overview of the white paper, which was prepared and made publicly available on March 24, 2016, to support the public meeting.

The paper provides the staff's preliminary assessment of whether or not natural hazards other than seismic or flooding warrant additional regulatory action as part of the NRC's Fukushima lessons learned response. The staff assessment is based on a review of a variety of domestic and international documents related to external hazards. The staff provided an overview of the list of hazards considered in the paper. On the basis of its preliminary assessment, the NRC staff determined that it has sufficient information at this time to conclude that among natural hazards other than seismic and flooding, only those associated with high winds and snow loads had potential for additional regulatory action. The NRC staff discussed its initial considerations for the assessment of high winds and snow loads during the meeting and stated that it intends to finalize its assessment in these areas by the end of 2016.

The NRC staff received comments during the meeting, and after the meeting, comments were provided to email accounts the NRC staff established to collect comments. The comments the staff received, which will be considered as the preliminary assessment is updated, included the following comments:

- Regarding the NRC staff's hurricane assessment the staff should consider the warning time and the preparations that licensees take based on this warning time to minimize the chance of hurricane-generated missiles. The staff should also consider that hurricane winds are straight line winds that do not have a lifting component like a tornado. Consequently, there is a less likelihood of an automobile to be lifted into the air during a hurricane.
- A member of the public noted that a figure providing a comparison of wind speeds at sites did not include the name of the site. There was also a similar question received relative to the snow load evaluation in that the staff did not identify in the paper the plants that necessitate further assessment. The staff stated during the meeting that because its assessment was preliminary and additional analysis would be performed for both high winds and snow loads it did not consider it appropriate to provide detailed information regarding the sites. For the snow load evaluation the staff did note that the plants that it would review in more detail included plants along the Great Lakes that are subject to lake-effect snow and plants in the Northeast that are subject to heavy snow falls.
- An industry member commented that the Electric Power Research Institute (EPRI) has provided an update to one of the documents that the staff referenced and that the staff should consider the information in this new report. The EPRI report is dated October 2015, its EPRI ID number is 3002005287, and the title of the report is "Identification of External Hazards for Analysis in Probabilistic Risk Assessment: Update of Report 1022997." The report is publicly available from EPRI's website.

The staff concluded the meeting by noting that it was targeting providing an updated interim assessment to the Commission by the end of May 2016 and intended to engage the Advisory Committee on Reactor Safeguards prior to providing the updated assessment to the Commission. The staff also noted that it was targeting December 2016 for providing the Commission with the final assessment. The staff plans to have additional public interactions in the summer time frame to discuss progress and receive stakeholder input on its assessment of

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snow loads and high winds. The staff is particularly interested in actions and experiences licensees have had in responding to these events and to also gain insights from high wind probabilistic risk assessments that are currently being performed by some licensees.

Please direct any inquiries to me at 301-415-1132 or joseph.sebrosky@nrc.gov.

Enclosure:

List of Attendees

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Enclosure:

List of Attendees

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NAME	JSebrosky	SLent	MShams	JSebrosky
DATE	04/20/2016	04/19/2016	04/20/2016	04/20/2016

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Public Meeting to Discuss Nuclear Regulatory Commission Staff's
Preliminary Assessment of Fukushima Lessons Learned Related to
Evaluation of Natural Hazards other than Seismic and Flooding
April 5, 2016

Attendance List

Name	Organization	Name	Organization
Jack Davis	NRC/NRR/JLD	Al Elms*	Dominion
Mohamed Shams	NRC/NRR/JLD	Rick Rohrer*	Xcel Energy
Stewart Bailey	NRC/NRR/JLD	Bob Coad*	First Energy
William Reckley	NRC/NRR/JLD	Charlotte Geiger*	Public Service Electric and Gas
Joe Sebrosky	NRC/NRR/JLD	Steven Osting*	First Energy
Anthony Minarik	NRC/NRR/JLD	Lloyd Generette*	Environmental Protection Agency
Sheila Ray	NRC/NRR/DE	Dale Wuokko*	
Robert Kisek	NRC/COM/JMB	Michael Madison*	Balch & Bingham, LLP
Jim Hickey	NRC/NRR/DSS	Daniel Bullen*	Defense Nuclear Facilities Safety Board
William Burton	NRC/NRR	Leo Shanley*	Jensen Hughes
Amitava Ghosh	NRC/NRR/DE	Jim Peschel*	Certrec
Mehdi Reisifard	NRC/NRR/DRA	Senug Gyu Hyun*	Korea Institute of Nuclear Safety
Nathan Siu	NRC/RES/DRA	Roy Linthicum*	Exelon
Nilesh Chokshi	NRC/NRO	Mark Moenssens*	Westinghouse
Brad Harvey	NRC/NRO	Leunis van Eeden	Nuscale
Greg Galletti	NRC/NRO	Craig Banner*	Public Service Electric and Gas
Steve Hess	Electric Power Research Institute	Brian Veach*	Urenco
Steve Frantz	Morgan Lewis Bockius	Neil Sheehan*	NRC
Jana Bergman	Curtiss Wright	Kevin Leuer*	Minnesota Department of Public Safety
David Distel	Exelon	Ray Schneider*	Westinghouse
Andrew Mauer	Nuclear Energy Institute	Paul Guill*	Duke Energy
Jeff Beattie*	IHS Energy Daily	Gerry Kindred*	Tennessee Valley Authority
Ogden Sawyer*	Areva		

* indicates individual registered for webinar

Enclosure