



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

January 19, 2018

MEMORANDUM TO: Houman Rasouli, Branch Chief
Performance and Reliability Branch
Division of Risk Analysis
Office of Nuclear Regulatory Research

FROM: Anders Gilbertson, Reliability and Risk Analyst */RA/*
Performance and Reliability Branch
Division of Risk Analysis
Office of Nuclear Regulatory Research

SUBJECT: PUBLIC MEETING ON THE NRC STAFF COMMENTS ON THE
AMERICAN SOCIETY OF MECHANICAL ENGINEERS AND
AMERICAN NUCLEAR SOCIETY SEISMIC PROBABILISTIC
RISK ASSESSMENT STANDARD CODE CASE AND NEI 12-13

On December 12, 2017, the Nuclear Regulatory Commission (NRC) staff held a public meeting to obtain stakeholder feedback on the NRC's comments on the American Society of Mechanical Engineers (ASME) and American Nuclear Society (ANS) seismic probabilistic risk assessment (PRA) standard code case and NEI 12-13, "External Hazards PRA Peer Review Process Guidelines." External stakeholder participants included representatives from the ASME/ANS Joint Committee on Nuclear Risk Management (JCNRM), the Nuclear Energy Institute, Palo Verde Generating Station, the Pressurized-Water Reactor Owners Group, RIZZO Associates, Scientech, Tennessee Valley Authority, and Westinghouse Electric Company. The meeting announcement and agenda was made publicly available on November 13, 2017, in the NRC's Agencywide Document Access and Management System (ADAMS) under accession number ML17346A382. The following is a summary of the presentations and discussions that occurred.

Representatives of NEI presented stakeholder feedback on NRC staff comments on NEI 12-13 and indicated that the NRC staff comments on NEI 12-13 are being addressed in a new consolidated guidance document on the PRA peer review process, NEI 17-07, "Performance of PRA Peer Reviews Using the ASME/ANS PRA Standard." The following are some of the points discussed by the NRC staff and stakeholders.

- NRC indicated that it would be helpful for industry to point out where the guidance in NEI 17-07 differs from the related guidance in the source documents that are being superseded (i.e., NEI 05-04, NEI 07-12, NEI 12-13).

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- Regarding NRC comment 11 in attachment 4, industry emphasized that the host utility for a PRA peer review is responsible for developing and submitting inquiries on interpretations of the ASME/ANS PRA standard, not the PRA peer review team. The NRC staff indicated they would review the staff comment to determine whether the issue needs to be addressed in the approval letter.
- Regarding NRC comment 13 in attachment 4, given that utilities perform varying degrees of self-assessment, industry believes that presenting the peer review team member qualifications as requirements is considered too restrictive and the qualifications should instead be presented as expectations.
- Regarding comment 28 in attachment 4, industry does not believe the host utility needs to provide characterizations of model uncertainty beyond what is required by the ASME/ANS PRA standard.
- Regarding comment 30 in attachment 4, industry disagrees that a peer reviewer should document a Fact & Observation (i.e., a finding) when assessing any supporting requirement (SR) as Capability Category (CC) I. Industry suggested instead that RG 1.200 be revised to state that the peer review should document all peer review findings and SRs met at the CC I level.

Representatives from the ASME/ANS JCNRM provided feedback on the NRC staff comments on the ASME/ANS seismic PRA standard code case in written form, as documented in attachment 3. The following are some of the points discussed by the NRC staff and stakeholders from the submitted document and regarding other related issues.

- NRC staff discussed a recent issue that had been raised by industry regarding the term “application” as it is used in the ASME/ANS Level 1/Large Early Release Frequency PRA Standard for Nuclear Power Plant Applications (the PRA standard). In particular, in cases where the term “application” is used in the PRA standard as opposed to the defined term “PRA application,” industry was interpreting application as meaning it referred specifically to a regulatory application. This as opposed to application being a broad reference to applications that use a PRA, regardless of whether it is regulatory or non-regulatory in nature. The NRC staff emphasized that the term “application” refers to applications as defined in Section 1-2.2 of the PRA standard under the term “PRA application,” which includes regulatory and non-regulatory applications. The NRC staff and members of industry were in agreement on the stated meaning and use of the term “application.” The NRC staff also noted that, although the PRA standard uses both terms to mean the same thing, it is recommended that the standard be revised to replace, as appropriate, instances of the term “application” that refer to a PRA application with the term “PRA application.” Alternatively, the term “PRA application” could be changed to the term “application,” but without changing the current definition used to define PRA application.
- Usage of the action verbs “ESTIMATE” and “CALCULATE” in the Code Case was discussed. It was noted that, ESTIMATE may involve either a judgement or a mathematical process; however, CALCULATE involves a mathematical process, but is not appropriate for cases where a judgement should not be used. The NRC agreed to review the usage of these action verbs in light of this feedback.

Following the conclusion of technical discussions, the NRC staff indicated that, in developing the related NRC approval letters, the staff would review their comments on NEI 12-13 and the ASME/ANS seismic PRA standard code case in light of stakeholder feedback and discussions during the meeting.

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Enclosure:

1. List of Meeting Attendees
2. NRC Presentation (ADAMS Accession No. ML17345A937)
3. NEI Presentation (ADAMS Accession No. ML17353A344)
3. ASME/ANS JCNRM Feedback Handout (ADAMS Accession No. ML17342A337)
4. NRC Comments on NEI 12-13 (ADAMS Accession No. ML17313B183)
5. NRC Comments on ASME/ANS seismic PRA standard code case (ADAMS Accession No. ML17313B184)
6. NEI 17-07, Draft (ADAMS Accession No. ML17341A548)

DISTRUBUTION:

M. Drouin	S. Samaddar	K. Manoly	T. Lupold	Y. Wong
J. Pires	C. St. Peters	M. Reisfard	M. Caruso	C. Ng
N. Chokshi	S. Rosenberg	S. Vasavada	M. Hayes	B. Titus
C. Munson	K. Coyne	S. Lyons	G. Thomas	M. Dudek
D. Heezel	J. Mittman	S. Weerakkody	I. Tseng	F. Sock
J. Xu	M. Stuzke	J. Ake	H. Rasouli	S. Dinsmore
G. Casto				

ADAMS Accession No.:ML18017A909

OFFICE	RES/DRA/PRB	RES/DRA/PRB
NAME	A. Gilbertson	H. Rasouli
DATE	01/17/18	01/19/18

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LIST OF ATTENDEES

Public Meeting on the NRC Staff Comments on the ASME/ANS Seismic PRA Standard Code
Case and NEI 12-13

December 12th, 2017 1:15 p.m. – 4:30 p.m.
Two White Flint North, Room 02B03
11545 Rockville Pike, Rockville, MD

<u>Name</u>	<u>Organization</u>
Mary Drouin	NRC/RES/DRA
Anders Gilbertson	NRC/RES/DRA
Jose Pires	NRC/RES/DE
Sara Lyons	NRC/NRR/DRA
JS Hyslop	NRC/NRR/DRA
Stephen Dinsmore	NRC/NRR/DRA
Martin Stutzke	NRC/NRO/DSRA
Nelish Chokshi	NRC/NRO/DSEA
Jim Xu	NRC/NRO/DEI
M.K. Ravindra	ASME/ANS JCNRM
Paul Amico	ASME/ANS JCNRM
Robert Budnitz	ASME/ANS JCNRM
Ram Srinivasan	ASME/ANS JCNRM
Simon Kleinbart	City University of New York
Victoria Anderson	Nuclear Energy Institute
Jonathan Lucero	Palo Verde Generating Station
Roy Linthicum	Pressurized-Water Reactor Owners Group
Eddie Guerra	RIZZO Associates
Jana Bergman	Sciencetech
Gerry Kindred	Tennessee Valley Authority
Andrea Maioli	Westinghouse Electric Company

ASME = American Society of Mechanical Engineers
ANS = American Nuclear Society
DE = Division of Engineering
DEI = Division of Engineering and Infrastructure
DRA = Division of Risk Analysis (RES)/Division of Risk Assessment (NRR)
DSEA = Division of Site Safety and Environmental Analysis
DSRA = Division of Safety Systems, Risk Assessment, and Advanced Reactors
JCNRM = Joint Committee on Nuclear Risk Management
NRO = Office of New Reactors
NRR = Office of Nuclear Reactor Regulation
RES = Office of Nuclear Regulatory Research