

August 28, 2014

MEMORANDUM TO: Gregory T. Bowman, Chief
Policy and Support Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

FROM: Rajender Auluck, Senior Project Manager */RA/*
Policy and Support Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF AUGUST 7, 2014, MEETING TO DISCUSS
ACTIVITIES ASSOCIATED WITH IMPLEMENTATION OF
NEAR - TERM TASK FORCE RECOMMENDATION 5.1
RELATED TO CONTAINMENT VENTING SYSTEMS

On August 7, 2014, a Category 2 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff, representatives from the Nuclear Energy Institute (NEI) and the Boiling Water Reactor Owners Group (BWROG) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14204A069), to continue discussions on activities directed by the Commission in staff requirements memorandum (SRM) dated March 19, 2013 (ADAMS Accession No. ML13078A017), "Consideration of Additional Requirements for Containment Venting Systems for Boiling Water Reactors with Mark I and Mark II containments". These discussions were related to the NRC's Implementation of Order EA-13-109, which addressed Recommendation 5.1 of the Near-Term Task Force (NTTF) Recommendations for Enhancing Reactor Safety in the 21st Century report, issued July 12, 2011, (ADAMS Accession No. ML111861807).

The NRC staff opened the meeting, thanked everyone for supporting these public meetings; and highlighted the importance of these public meetings in developing guidance and other supporting documents over the last 15 months. In their opening remarks, the NEI task group senior manager also thanked the NRC staff for holding these public meetings and developing supporting documents which have been very useful for the licensees' in preparation of their site-specific Overall Integrated Plans (OIPs), as required by the order.

The NEI/industry presentation provided options for implementation of Phase 2 of Order EA-13-109 and noted that water addition and water management during severe accident conditions is extremely beneficial. For example, the industry discussed that the capability to add water to the containment under severe accident conditions would greatly assist in controlling drywell temperature and maintaining containment integrity.

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Two new terms were introduced, (i) severe accident water addition (SAWA) for providing water to reactor vessel or drywell post-core damage, and (ii) severe accident water management (SAWM) for the purpose of preserving wetwell vent path. SAWA will require hardware changes including addition of a pump, and use of motive force and instrumentation capable of performing under severe accident conditions. SAWM includes strategies to mitigate drywell temperature extremes, protects containment from over pressure failure, and preserves the wetwell vent path. The NEI/industry working group had shared some of these thoughts in earlier public meetings. NEI indicated that additional details on these options will be provided for NRC staff review in the near future.

Following the NEI/industry presentation, the staff provided their initial reactions to the recently submitted OIPs by licensees for implementation of Phase 1 of Order EA-13-109. The staff briefly described the review process and noted that it will include audits at plant sites. The overall review process will be similar to the one used by the staff in reviewing licensee responses on Orders EA-12-049 and EA-12-051. The staff noted that review of selected OIPs is underway and additional questions will be provided as these reviews progress. The staff also stated that based on a quick look, the OIPs contain very limited vent design information and staff will have several open items on this topic. The staff understands that information will be updated as design specifications are finalized, and will be using similar templates as what was used for the mitigating strategies order. The staff will start issuing interim staff evaluations beginning December 2014.

The staff also stated that it agrees with industry's proposal that for Phase 2 implementation, the design temperature of 545 degrees F° for the drywell vent is appropriate in cases where water is added to the drywell. This was based on the staff's evaluations using the MELCOR computer model and comparing it with the information provided by industry in previous public meetings. The staff also discussed the NEI white paper HCVS-WP-03, Rev. 0 related to hydrogen/carbon monoxide control measures. As a general comment, the staff noted that the white paper appears to suggest a design that would "preclude" a deflagration to detonation (DDT) from occurring and would establish acceptability for vent operation with combustible mixtures up close to the DDT threshold without designing for detonations or preventive measures such as inerting (sufficient to prevent any ignition). The staff believes that, given the uncertainties involved with the DDT phenomena, this would require more detailed and time consuming staff reviews and audits with less likelihood of staff determination of acceptability than either a detonation tolerant or inerted approach. The staff also provided comments on specific sections of the report which were included in the meeting handout (ADAMS Accession No. ML14239A630). The staff further stated that these and any additional staff comments will be provided to NEI for their consideration. The NEI representative indicated that they will review the comments and will be ready to discuss at a future public meeting. The staff has now finalized their comments and mark-up's on the document (HCVS-WP-03), which can be found in ADAMS under Accession No. ML14239A531. Next, the staff provided an overview of updated alternatives for filtering strategies rulemaking based on failure modes. These were developed with input from industry and stakeholders and will be discussed further at the next public meeting scheduled for August 21, 2014.

Members of the public attended in person, through the bridge-line and via webcast. At designated points during the meeting, members of the public were invited to provide any comments on the presentations. Members of the public asked some clarifying questions. The NRC staff responded to all questions adequately.

Enclosure:
List of Attendees

Members of the public attended in person, through the bridge-line and via webcast. At designated points during the meeting, members of the public were invited to provide any comments on the presentations. Members of the public asked some clarifying questions. The NRC staff responded to all questions adequately.

Enclosure:
List of Attendees

DISTRIBUTION:

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VDricks
RidsNrrLASLent

ADAMS Accession Nos.: Pkg. ML14239A294, Summary: ML14233A119, Handouts: ML14239A630

OFFICE	NRR/JLD/PSB/PM	NRR/JLD/LA	NRR/JLD/PSB/BC	NRR/JLD/PSB/PM
NAME	RAuluck	SLent	GBowman (WOrders for)	RAuluck
DATE	08/28/14	08/28/14	08/28/14	08/28/14

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**NRC Public Meeting
Recommendation 5.1 Related to Containment Venting System
August 7, 2014**

List of Attendees

Name	Organization
Rajender Auluck	Nuclear Regulatory Commission(NRC)
Randy Bunt	Southern Nuclear Company(SNC)
William Reckley	NRC
Nageswara Karipineni	NRC
Jerome Bettie	NRC
Karl Sturzebecher	NRC
Sud Basu	NRC
Ed. Fuller	NRC
Kevin Witt	NRC
Paul Gunter	Beyond Nuclear
Deep Ghosh	SNC
Phil Amway	CENG
Robert Ginsberg	Brunswick Plant
Jena Bergman	Curtis-Wright Corp.
Lisa Matis	Tetrattech
Nancy Chapman	Bechtel
Richard Rogaliski	Columbia Station
Thomas Hafera	Worley Parson
Derwood Tootle	Southern Nuclear
Tom Parker	Boiling Water Reactor Owners Group
Michael Gowthers	PPS Susquehanna
David Burch	James A. Fitzpatrick Nuclear Power Plant

Enclosure

Dan Jacobson	Entergy
Brian Lee	NRC
Greg Bowman	NRC
Weidong Wang	NRC
Jeff Gabor	ERIN Engineering
Robert Pettis	NRC
Tina Ghosh	NRC
Doug Culver	Columbia Generating Station