

June 28, 2012

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

FROM: Robert J. Fretz, Senior Project Manager /RA/  
Projects Management Branch  
Japan Lessons-Learned Project Directorate  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MAY 23, 2012, PUBLIC MEETING ON INTERIM  
STAFF GUIDANCE FOR ORDER EA-12-050, RELIABLE  
HARDENED VENTS

On May 23, 2012, U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with the Boiling Water Reactors Owners' Group (BWROG) to discuss the preliminary draft interim staff guidance (ISG) document for Order EA-12-050 (the Order) relating to reliable hardened containment vents at boiling-water reactor (BWR) facilities with Mark I and Mark II containments. The NRC is developing the ISG to this Order, and the final guidance document is planned to be issued by August 31, 2012. The NRC staff is requesting input from stakeholders regarding the implementation of Order requirements. A list of attendees is provided as Enclosure 1 to this memorandum.

The NRC staff opened the meeting by providing an overview of the plan to issue the ISG for Order EA-12-050. To meet the commitment to publish the ISG no later than August 31, 2012, the staff noted that it intended to publish a draft ISG on or about June 1, 2012, in the *Federal Register*. Following publication of the draft ISG in the *Federal Register*, the public will have 30 days to provide comments on the proposed guidance. The staff stated at the meeting that the comment period is expected to close on or about July 1, 2012. The actual date of the publication of the draft ISG was June 7, 2012, and the public comment period will close on July 7, 2012. The staff provided a general outline of the ISG contents. Key sections of the draft ISG include: (1) definitions, (2) administrative requirements, (3) reporting requirements, and (4) NRC staff positions on each of the Order's technical requirements. The NRC staff slides can be obtained from NRC's Agencywide Documents Access Management System (ADAMS) under Accession No. ML12174A155 (Enclosure 2).

The NRC staff reviewed each of the staff positions relating to the Order's administrative, reporting and technical requirements, and presented a preliminary draft of the ISG to the BWROG and public stakeholders. The preliminary draft version of the ISG may be found in ADAMS under Accession No. ML12143A341. The staff also noted that the Order delineated performance-based requirements and that the intent of the ISG is to provide additional information or clarifications relating to the performance-based requirements. The NRC staff recognizes that each of the BWR facilities impacted by the order have unique physical

characteristics that may require a variety of approaches to successfully meet each of the order's requirements.

The BWROG and industry representatives provided their comments to the draft ISG, and presented additional insights relating to Order EA-12-050. The BWROG slides can be obtained from ADAMS under Accession No. ML12174A157 (Enclosure 3), and the BWROG letter dated May 18, 2012, providing written comments on the content of the ISG can be obtained from ADAMS under Accession No. ML12174A290 (Enclosure 4). In general, the NRC staff and BWROG are aligned with the overall content of the ISG; however, the representatives asked the staff to review the draft ISG to ensure adequate alignment with the ISG for the March 2012 order for mitigating systems (EA-12-049) and the industry's guidance document on the "FLEX" program. The staff noted that it intended to ensure that guidance regarding the use of FLEX equipment in order to maintain sustained operations would be aligned with the ISG for EA-12-049.

In addition, the BWROG presented information regarding possible changes to the BWR Emergency Procedure Guidelines (EPGs). The owner's group is considering revising its containment venting concept to allow for earlier venting of the containment when it is at lower pressures. Currently, the EPGs state that operators should vent when the containment pressure is between approximately 35 psig and the Primary Containment Pressure Limit which is typically around 60 psig. The current guidelines are consistent with the NRC's most recent safety evaluation report which states that containment venting is used only as a "last resort." The BWROG is considering changing the EPGs to allow venting at lower pressures under certain conditions in order to allow use of portable diesel driven pumps to inject water in the reactor vessel as well as maintain containment pressure below reactor core isolation cooling system backpressure trip set points. The owner's group is requesting feedback on whether or not licensees would be able to make changes to plant-specific procedures under Title 10 of the *Code of Federal Regulations*, Part 50.59, "Changes, tests and experiments."

Following the BWROG presentation and discussions on reliable hardened vent performance requirements, the NRC staff sought input and comments from members of the public and non-governmental organization representatives on the draft ISG. Examples of input frequently mentioned by stakeholders included concerns as to why the NRC: (1) did not require the vents to be able to handle severe accidents, and (2) did not consider the presence of hydrogen gas that is generated following a severe accident. Many public stakeholders stated that the NRC staff erred when it assumed that no core damage would be present in developing performance criteria for the hardened vents that were ordered by the NRC in March, and concluded that the current order is insufficient as a result.

Enclosures:  
As stated

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As stated

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**ADAMS Accession Nos.:**

ML12132A372 (Pkg.), ML12174A154 (Sum.), ML12174A155 (Enc. 2), ML12174A157 (Enc. 3), ML12174A290 (Enc. 4)

<b>OFFICE</b>	PM: NRR/JLD/PMB	LA: NRR/DORL	BC: NRR/JLD/PMB	PM: NRR/JLD/PMB
<b>NAME</b>	RFretz	SRohrer	RPascarelli (LRegner for)	RFretz
<b>DATE</b>	06/22/2012	06/25/2012	06/28/2012	06/28/2012

**OFFICIAL RECORD COPY**

Memo to Robert J. Pascarelli from Robert J. Fretz dated June 28, 2012

SUBJECT: SUMMARY OF MAY 23, 2012, PUBLIC MEETING ON INTERIM STAFF  
GUIDANCE FOR ORDER EA-12-050, RELIABLE HARDENED VENTS

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LIST OF ATTENDEES

U.S. NUCLEAR REGULATORY COMMISSION

MAY 23, 2012, PUBLIC MEETING ON THE ISG FOR

ORDER EA-12-050, RELIABLE HARDENED VENTS

<u>Name</u>	<u>Organization</u>
Robert Fretz	USNRC NRR/JLD
Nageswara Karipineni	USNRC NRR/DSS/SCVB
David K. White	AREVA
Tom Parker	BWROG
Tom Axley	TVA
Bill Williamson	TVA/BWROG
Gregory Krueger	BWROG/Exelon
Rob Whelan	BWROG
Pete Cochran	Morgan Lewis
Fred Emerson	BWROG
Paul Gunter	Beyond Nuclear

Members of the public that signed up to participate in the webinar included:

Joseph Somsel	Global BWR Engineering
Robert D. Schuetz, Jr.	Sargent & Lundy, LLC
Phil Flesch	Automated Engineering Services
John McIntyre	Progress Energy
Fred Maass	AREVA, Inc
M. J. Barbaretta	GE-Hitachi Nuclear Energy
Jack Wilkinson	NextEra Energy
Hoa Hoang GE	Hitachi Nuclear Energy
Mike Drudy	Westinghouse Electric Company
Glen Ohlemacher	DTE Energy (Fermi 2)
Steve Thomas	Black & Veatch Corporation
J. Michael O'Connell	Shaw Nuclear Services
Tom Houghton	Certrec Corporation
Jennifer Mansh	Hogan Lovells US LLP
Doug True	erineng.com
James Steele	TVA
Yaruan Cai	Constellation Energy
Erica Murphy	Rocky Mountain Engineering
William E. Meek	Worley Parsons
Alice Carson	Bechtel
Tony Bockelman	Black & Veatch Corporation
Dale Wuokko	Toshiba America Nuclear Energy Corporation