

June 22, 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 2, 2012, PUBLIC MEETING ON
IMPLEMENTATION OF ORDER EA-12-050, RELIABLE HARDENED
VENTS, AND THE ISSUE OF FILTERED CONTAINMENT VENTS

On May 2, 2012, U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with the Boiling Water Reactors Owners' Group (BWROG) to discuss the implementation of Order EA-12-050, regarding reliable hardened containment vents at Boiling Water Reactors (BWR) facilities with Mark I and Mark II containments. The NRC is developing interim staff guidance (ISG) relating to this order that is to be issued by August 31, 2012, and the staff requested input from stakeholders regarding the implementation of order requirements. In addition, the staff is seeking input relating to the issue of filtered vents as described in SECY-12-0025, "*Proposed Orders and Requests for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami*," issued February 17, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12039A103). A list of attendees is provided as Enclosure 1.

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 will publish a proposed draft ISG on or about May 31, 2012, in the *Federal Register*. Following the draft ISG's publication in the *Federal Register*, the public will have 30 days to provide comments on the proposed guidance. This comment period is expected to close on or about July 2, 2012. The staff provided a general outline of the ISG contents. Key sections of the ISG will 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 reviewed each of the order's administrative, reporting, and technical requirements, and presented preliminary staff viewpoints on each of the requirements. 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. Therefore, the staff does not intend to impose a single solution to licensees implementing the order.

The staff outlined its current views relating to requirements for reliable hardened vents. The NRC staff slides can be obtained from ADAMS Accession Nos. ML12124A132 (Enclosure 2).

BWROG and industry representatives presented their insights relating to Order EA-12-050, requirements for reliable hardened vents. The BWROG slides can be obtained from ADAMS Accession No. ML12124A130 (Enclosure 3). In general, the NRC staff and BWROG are aligned with the overall content of the ISG; however, key areas that will require further discussion include: (1) content of the February 28, 2013, submittal to the NRC, (2) definitions of certain terms, such as "reliable," (3) staff viewpoints on "early containment venting" and (4) the use of FLEX equipment in order to maintain sustained operations. The issue of early containment venting is of particular interest to the BWROG, and the owner's group is interested in learning whether or not the NRC staff has changed its views on containment venting as a "last resort" in light of the lessons learned from Fukushima.

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 issue of filtered containment vents. The staff noted that the Commission directed the staff in SRM-SECY-11-0137, to address the issue of 'Filtration of Containment Vents' in conjunction with the Tier 1 issue on hardened vents for Mark I and Mark II containments. The introduction of this issue prompted numerous comments from members of the public participating in person and on the webinar. Examples of input frequently mentioned by stakeholders included: (1) concerns as to why the NRC did not require the vents to be able to handle severe accidents and the presence of hydrogen gas following a severe accident; (2) many persons considered containment vent filters a "no brainer" and stated that filters should be made a requirement to ensure that the containment is able to "do what it is suppose to do;" (3) another person commented that filtered vents should be required because operators never know when core damage really begins; (4) the only statistic that is important to the industry is money; and (5) the NRC is not serving the public interest by assuming no core damage is present with the hardened vents that were ordered by the NRC in March.

One member of the public concluded that the regulated industry's apparent silence on the issue of filtered vents indicates that it is secretly meeting with the NRC on this issue. The NRC representatives responded to this comment by stating that the May 2nd meeting was the first time that the NRC staff has met with the industry to begin addressing this issue. Also, a representative from the BWROG clarified that the reason it was not prepared to discuss filtered vents was because the Nuclear Energy Institute (NEI) was chosen by the industry to serve as its representative on this issue and not the BWROG. A representative from NEI later clarified the industry's position on this subject with the following comments: (1) the NRC needs to be "careful" on this issue because one of the lessons learned from Fukushima was that containment filters would not have made a difference given the fact that the rupture discs did not open before the containment "self-depressurized;" (2) efforts to evacuate the local population were successful and that there were no radiation-related fatalities as a result, (3) the most effective way to address this issue is to focus on preventing core damage, then managing the potential core damage, and developing more reasonable approaches to the issue of land contamination; and (4) the NRC should also avoid a "rush to judgment" and wait for further analysis that it was performing on alternative solutions to filtered venting.

R. Pascarelli

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The NEI representative stated that the organization was discussing the possibility of decoupling the filter decision from the venting decision at the highest levels of the Commission, and recommended that the NRC staff work with the industry and come to alignment with the industry on an agreed-to solution.

The NRC staff also received copies of additional information relating to filtered containment vents (see enclosures 4 – 6). The meeting was adjourned at approximately 11:30 a.m. EDT.

Enclosures:

As stated.

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Enclosures:
As stated.

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ADAMS Accession Nos.:

| | |
|--------------------------------|--------------------------|
| Package: ML12090A002 | Enclosure 4: ML12130A373 |
| Summary: ML12130A369 | Enclosure 5: ML12130A375 |
| Enclosure 1: List of Attendees | Enclosure 6: ML12130A378 |
| Enclosure 2: ML12124A132 | |
| Enclosure 3: ML12124A130 | |

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|---------------|-----------------|--------------|-----------------|-----------------|
| OFFICE | PM: NRR/JLD/PMB | LA: NRR/DORL | BC: NRR/JLD/PMB | PM: NRR/JLD/PMB |
| NAME | RFretz | BTully | RPascarelli | RFretz |
| DATE | 05/14/2012 | 05/14/2012 | 05/30/2012 | 06/22/2012 |

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LIST OF ATTENDEES

U.S. NUCLEAR REGULATORY COMMISSION

MAY 2, 2012, PUBLIC MEETING ON

IMPLEMENTATION OF ORDER EA-12-050, RELIABLE HARDENED

VENTS AND THE ISSUE OF FILTERED CONTAINMENT VENTS

| Name | Organization |
|----------------------|--|
| Steven Bloom | U.S. Nuclear Regulatory Commission (NRC) |
| Eric Bowman | NRC |
| David Brown | NRC |
| Dan Dorman | NRC |
| Donald Dube | NRC |
| Robert Fretz | NRC |
| Edward Fuller | NRC |
| Nageswara Karipineni | NRC |
| John C. Lane | NRC |
| Richard Lee | NRC |
| John McKirgan | NRC |
| John Monninger | NRC |
| Allen Notafrancesco | NRC |
| Bill Ruland | NRC |
| Basu Sudhamay | NRC |
| Robert Taylor | NRC |
| Wei-Wu Chao | AEC Taiwan |
| Paul Gunter | Beyond Nuclear |
| Gregory Krueger | BWROG/Exelon |
| Ted Schiffley | BWROG/Exelon |
| Rob Whelan | BWROG/GEH |
| Tony Browning | BWROG/NextEra Energy |
| Tom Parker | BWROG/Xcel |
| Kohei Ikuta | Chubu Electric |
| Doug True | ERIN |
| Colin Mount | FirstEnergy |
| Richard Rusin | GE Hitachi |
| Kenjiro Aono | JNES |

| Name | Organization |
|------------------|--------------------------------------|
| Fred Emerson | MARACOR |
| Pete Cochran | Morgan Lewis |
| Steven Kraft | Nuclear Energy Institute (NEI) |
| P. Castleman | OCM/KLS |
| W. Order | OCM/WDN |
| Randy Bunt | SNC |
| Tom Axley | TVA |
| Uldis Vanags | Vermont Department of Public Service |
| Don Bowers | Weir Valves & Controls |
| Thomas Hafer | WorleyParsons |
| J. Dennis Graves | WorleyParsons |