

NRC Responses to Public Comments

**Japan Lessons-Learned Division Interim Staff Guidance
JLD-ISG-2015-01: Compliance with Phase 2 of Order EA-13-109,
Order Modifying Licenses with Regard to Reliable hardened
Containment Vents Capable of Operation under Severe Accident
Conditions**

(Docket ID NRC-2015-0048)

I. Introduction

This document presents the U.S. Nuclear Regulatory Commission (NRC) staff's responses to comments received on the Draft interim staff guidance (ISG) document, "JLD-ISG-2015-01: Compliance with Phase 2 of Order EA-13-109, Order Modifying Licenses with Regard to Reliable hardened Containment Vents Capable of Operation under Severe Accident Conditions. The Draft ISG was published in the *Federal Register* on March 10, 2015 (80FR12649). The public comment period closed on April 9, 2015; there were no late comments received.

Comment submissions on the draft document are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this page, the public can gain entry into the Agencywide Documents Access and Management System (ADAMS), which provides text and image files of NRC's public documents.

This comment resolution document is also available electronically at the NRC's Electronic Reading Room under ADAMS Accession No. ML15114A051.

The final ISG can be found in ADAMS at Accession No. ML15104A118

II. Comment Submissions

The NRC received two (2) comment submissions. The NRC-designated identifier for the comment submissions, the name of the submitters, the submitters' affiliation, and the ADAMS Accession Numbers are provided below.

Summary Table		
Name	Affiliation	ADAMS Accession No.
1. Ms. Nancy Foust	SimplyInfo	ML15083A277
2. Mr. Steven Kraft, Senior Technical Advisor	Nuclear Energy Institute, 1201 F Street, N. W., Washington, DC	ML15104A316

III. Public Comments and NRC Response

General Comments on ISG		
Comment No.	Comment	NRC Response
1a	<p>The NRC rule on hardened venting as currently written is a very real and highly probable risk to public safety. Hardened venting should be mandatory and filtered venting should also be mandatory. The industry desired option to somehow “make it unlikely” venting would be needed as an alternative option does not stand up to technical scrutiny. The 3 meltdowns at Fukushima Daiichi showed that 3 out of 3 times venting was not just required but a major part of the coping strategy. Industry’s strategy of just not letting the fuel get uncovered or containment sprays (that did not stop unit 3 from total failure) is unrealistic and a technical fantasy.</p>	<p>The NRC disagrees with this comment. Order EA-13-109 required that all BWR plants with Mark I and Mark II containments have reliable hardened venting capability from containment to assist in preventing core damage and addressing overpressurization of the containment. Order EA-13-109 revised the previous NRC requirement (Order EA-12-050) by extending the venting capability to function under severer accident conditions. Order EA-13-109 requires all BWRs to install and maintain a severe accident capable vent from the containment wetwell and requires either a drywell vent or implementation of reliable containment venting strategy that makes it unlikely that a licensee would need to vent from the containment drywell before alternate reliable containment heat removal and pressure control is reestablished (i.e., avoiding or delaying the loss of the wetwell vent by managing the addition of water during the accident). The order allowed the implementation of the requirements in two Phases. The ISG for Phase 1, addressing wetwell venting capability, was issued on November 14, 2013. This ISG for Phase 2 addresses the guidance for a drywell vent or alternatively the development and implementation of a reliable containment venting strategy that makes it unlikely that a licensee would need to vent from the drywell during severe accident conditions.</p> <p>In the staff requirements memorandum (SRM) for</p>

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		<p>SECY-12-0157, dated March 19, 2013, the Commission directed the staff to develop a technical basis and rulemaking for filtering strategies and severe accident management for BWR Mark I and Mark II containments. The work related to the Commission direction on filtering strategies is progressing under Containment Protection and Release Reduction (CPRR) rulemaking. The NRC staff is currently developing an information paper to inform the Commission of the findings of the work performed under the CPRR rulemaking and staff's path forward.</p> <p>No changes were made in response to this comment.</p>
1b	<p>Hardened venting should be mandatory. Filtered venting should also be mandatory. It is well known problem that the torus of a BWR reactor can quickly become saturated or dried of the water needed for basic scrubbing of radiation only early in a meltdown scenario. This very thing happened at Fukushima Daiichi unit 2 where for over 2.5 hours the containment was vented through a torus that no longer had any filtering capability and after bottom head failure estimates put the corium as located in the containment bulb. This created a major release of radiation and risk to public health in Japan. No amount of hope, wishing and double talk from the nuclear operators in the US can get around these facts that a severe accident with multiple factors could very easily create the exact same scenario here in the US.</p>	<p>The NRC disagrees with this comment. As stated in the staff's response above, all BWR plants with Mark I and Mark II containments will have a reliable hardened wetwell vent from the containment that is capable of functioning under severe accident conditions. In addition, all those plants will also have a reliable hardened drywell vent from the containment that is capable of functioning under severe accident conditions or alternatively will have reliable strategies implemented that makes it unlikely that a vent from drywell would be needed.</p> <p>The issue related to filtered venting and filtration strategies are being handled separately under the CPRR rulemaking. The NRC staff expects that the regulatory basis for that rulemaking will be issued for public comment within the next several months.</p>

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		No changes were made in response to this comment.
1c	The current industry response of buying portable pumps and generators is window dressing. There are many scenarios where those could be useless and again, response efforts go back to the systems at the plant itself. This is a well-established fact, shown 3 out of 3 times in Japan that venting will be required. It should be required that not just by hardened venting but filtered venting by way of an additional filtration system like those already in use in Europe be used at all US nuclear plants. Anything less is an unacceptable risk to public safety and a dereliction of duty by the NRC	<p>The NRC disagrees with this comment. The mitigating strategies order and implementation guidance allows the usage of portable pumps and generators to help mitigate the effects of some external events. The venting capabilities that are required by Order EA-13-109 and addressed by the subject guidance supplement the mitigating strategies and also extend the requirements to address possible severe accident conditions. This ISG also allows the use of the same pumps and generators required under the mitigating strategies order provided licensees show the feasibility of establishing and supporting the equipment operation under severe accident conditions. As previously mentioned, the consideration of engineered filters or filtering strategies is being addressed as part of the regulatory basis for the CPRR rulemaking.</p> <p>No changes were made in response to this comment.</p>
2a	In general, the industry and NRC staff appear in alignment on most of the guidance.	<p>The NRC acknowledges the comment's general support for the ISG.</p> <p>No changes were made in response to this comment.</p>
2b	In conclusion, we reiterate our appreciation for the constructive engagement by the NRC staff in developing the guidance for implementation of Phase 2 of EA-13-109.	<p>The NRC acknowledges the comment's support for the NRC's engagement efforts in the development of this ISG.</p> <p>No changes were made in response to this comment.</p>