

NUCLEAR REGULATORY COMMISSION

[NRC-2012-0068]

Mitigation Strategies for Beyond-Design-Basis External Events

AGENCY: Nuclear Regulatory Commission

ACTION: Interim staff guidance; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing the final Japan Lessons-Learned Division Interim Staff Guidance (JLD-ISG), JLD-ISG-2012-01, Revision 1, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events.” This JLD-ISG provides guidance and clarification to assist nuclear power reactor licensees with the identification of measures needed to comply with requirements to mitigate challenges to key safety functions. These requirements are contained in Order EA-12-049, “Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events.”

DATES: This guidance is effective on **February 29, 2016**

ADDRESSES: Please refer to Docket ID **NRC-2012-0068** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2012-0068**. Address questions about NRC dockets to Carol Gallagher;

telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**

You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The JLD-ISG-2012-01, Revision 1 is available in ADAMS under Accession No. ML15357A163.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

- **NRC's Interim Staff Guidance Web Site:** <http://www.nrc.gov/reading-rm/doc-collections/isg/japan-lessons-learned.html>.

FOR FURTHER INFORMATION CONTACT: Eric Bowman, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-2963; e-mail: Eric.Bowman@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Background Information

The original interim staff guidance (ISG), Final Japan Lessons-Learned Project Directorate Interim Staff Guidance (JLD-ISG), JLD-ISG-2012-01, "Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," (ADAMS Accession No. ML12229A174) was issued to describe to the public methods acceptable to the NRC for complying with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (Order EA-12-049), issued March 12, 2012 (ADAMS Accession No. ML12054A736). This ISG endorsed the methodologies described in the industry guidance document, Nuclear Energy Institute (NEI) 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide" (NEI 12-06), Revision 0 (ADAMS Accession No. ML12242A378) submitted on August 21, 2012. The staff is now issuing Revision 1 to JLD-ISG-2012-01. This revision incorporates the NRC's review strategy described in COMSECY 14-0037, "Integration of Mitigating Strategies for Beyond-Design Basis External Events and the Reevaluation of Flooding Hazards" (ADAMS Accession No. ML14238A616) and endorses NEI 12-06, Revision 2 (ADAMS Accession No. ML16005A625).

The NRC issued Order EA-12-049 following evaluation of the Japan earthquake and tsunami, and resulting nuclear accident, at the Fukushima Dai-ichi nuclear power plant in March 2011. Order EA-12-049 requires all licensees and construction permit holders to develop a three-phase approach for mitigating beyond-design-basis external events. The initial phase requires the use of installed equipment and resources to maintain or restore core cooling, containment, and spent fuel pool cooling. The transition phase requires providing sufficient,

portable, onsite equipment and consumables to maintain or restore these functions until they can be accomplished with resources brought from off site. The final phase requires obtaining sufficient offsite resources to sustain those functions indefinitely. Order EA-12-049 also specified that the NRC would issue final interim staff guidance in August 2012, to provide additional details on an acceptable approach for complying with Order EA-12-049.

The original version of this ISG which endorsed the original NEI 12-06 was issued on August 29, 2012. The NRC staff revised this ISG in order to incorporate acceptable alternative approaches to compliance proposed by licensees and after clarifying its position on the interdependency of the Mitigating Strategies responses and the responses to the seismic and flooding reevaluations. The staff's clarified position was addressed in COMSECY-14-0037. This revised guidance will be publicly available and used by members of the industry to help develop their responses to Order EA-12-049, including impacts of the reevaluated seismic and flooding information, and by the NRC staff in its reviews of the licensees' strategies. On November 10, 2015 (80 FR 69702), the NRC requested public comments on draft JLD-ISG-12-01, Revision 1. The NRC staff received comments from four stakeholders which were considered in the development of the final JLD-ISG-12-01, Revision 1. The questions, comments, and staff resolutions of those comments are contained in "NRC Responses to Public Comments: Revision to Japan Lessons-Learned Division Interim Staff Guidance JLD-ISG-2012-01: Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML15357A142).

II. Congressional Review Act

This ISG revision is a rule as defined in the Congressional Review Act (5 U.S.C. §§ 801-808). However, the Office of Management and Budget has not found it to be a major rule as defined in the Congressional Review Act.

III. Backfitting and Issue Finality

This ISG provides guidance on an acceptable method for implementing the requirements contained in Order EA-12-049. Licensees may voluntarily use the guidance in JLD-ISG-2012-01, Revision 1 to demonstrate compliance with Order EA-12-049. Methods or solutions that differ from those described in this ISG may be deemed acceptable if they provide sufficient basis and information for the NRC to verify that the proposed alternative demonstrates compliance with Order EA-12-049. Issuance of this ISG does not constitute backfitting as defined in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.109, “Backfitting” (the Backfit Rule), and is not otherwise inconsistent with the issue finality provisions in 10 CFR part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants.”

Dated at Rockville, Maryland, this 22nd day of February 2016.

FOR THE NUCLEAR REGULATORY COMMISSION.

/RA/

Jack R. Davis, Director
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

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