[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2012-0068]

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

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft Japan Lessons-Learned Project Directorate guidance; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC or the Commission) is issuing the draft 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." This draft JLD-ISG provides guidance and clarification to assist nuclear power reactors applicants and licensees with the identification of measures needed to comply with requirements to mitigate challenges to key safety functions.

DATES: Comments must be filed no later than July 7, 2012. Comments received after this date will be considered, if it is practical to do so, but the NRC staff is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may access information and comment submissions related to this document, which the NRC possesses and are publically available, by searching on

http://www.regulations.gov under Docket ID **NRC-2012-0068**. You may submit comments by 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: 301-492-3668; e-mail: *Carol.Gallagher@nrc.gov*.
- **Mail comments to:** Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.
- **Fax comments to:** RADB at 301-492-3446.

For additional direction on accessing information and submitting comments, see "Accessing Information and Submitting Comments" in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Mr. Steven D. Bloom, Japan Lessons-Learned Project Directorate, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-2431; e-mail: *Steven.Bloom@nrc.gov*.

SUPPLEMENTARY INFORMATION:

I. Accessing Information and Submitting Comments

A. Accessing Information

Please refer to Docket ID **NRC-2012-0068** when contacting the NRC about the availability of information regarding this document. You may access information related to this document by the following methods:

- **Federal Rulemaking Web Site:** Go to *http://www.regulations.gov* and search for Docket ID **NRC-2012-0068**.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may access publicly-available documents online in the NRC Library 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 ADAMS accession number for each document referenced in this notice (if that document is available in ADAMS) is provided the first time that a document is referenced. The draft JLD-ISG-2012-01 is available in ADAMS under Accession No. **ML12146A014**.

- **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:** JLD-ISG documents are also available online under the "Japan Lessons Learned" heading at *http://www.nrc.gov/reading-rm/doc-collections/#int*.

B. Submitting Comments

Please include Docket ID **NRC-2012-0068** in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed. The NRC posts all comment

submissions at http://www.regulations.gov as well as entering the comment submissions into ADAMS, and the NRC does not edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information in their comment submissions that they do not want to be publicly disclosed. Your request should state that the NRC will not edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

SUPPLEMENTARY INFORMATION:

II. Background Information

The NRC staff developed draft JLD-ISG-2012-01 to provide guidance and clarification to assist nuclear power reactor applicants and 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," (ADAMS Accession No. ML12054A736). The draft ISG is not a substitute for the requirements in Order EA-12-049, and compliance with the ISG is not required. This ISG is being issued in draft form for public comment to involve the public in development of the implementation guidance.

On March 11, 2011, a magnitude 9.0 earthquake struck off the coast of the Japanese island of Honshu. The earthquake resulted in a large tsunami, estimated to have exceeded 14 meters (45 feet) in height that inundated the Fukushima Dai-ichi nuclear power plant site. The earthquake and tsunami produced widespread devastation across northeastern Japan and

significantly affected the infrastructure and industry in the northeastern coastal areas of Japan. When the earthquake occurred, Fukushima Dai-ichi Units 1, 2, and 3, were in operation and Units 4, 5, and 6, were shut down for routine refueling and maintenance activities. The Unit 4 reactor fuel was offloaded to the Unit 4 spent fuel pool (SFP). Following the earthquake, the three operating units automatically shut down and offsite power was lost to the entire facility. The emergency diesel generators started at all six units providing alternating current (ac) electrical power to critical systems at each unit. The facility response to the earthquake appears to have been normal.

Following the events at the Fukushima Dai-ichi nuclear power plant, the NRC established a senior-level agency task force referred to as the Near-Term Task Force (NTTF). The NTTF was tasked with conducting a systematic and methodical review of the NRC regulations and processes, and determining if the agency should make additional improvements to these programs in light of the events at Fukushima Dai-ichi. As a result of this review, the NTTF developed a comprehensive set of recommendations, documented in SECY-11-0093, "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," dated July 12, 2011 (ADAMS Accession No. ML11186A950). These recommendations were enhanced by the NRC staff following interactions with stakeholders. Documentation of the staff's efforts is contained in SECY-11-0124, "Recommended Actions to be Taken without Delay from the Near-Term Task Force Report," dated September 9, 2011 (ADAMS Accession No. ML11245A158) and SECY-11-0137, "Prioritization of Recommended Actions to be Taken in Response to Fukushima Lessons Learned," dated October 3, 2011 (ADAMS Accession No. ML11272A111).

As directed by the Commission's staff requirement memorandum (SRM) for SECY-11-0093 (ADAMS Accession No. ML112310021), the NRC staff reviewed the NTTF

recommendations within the context of the NRC's existing regulatory framework and considered the various regulatory vehicles available to the NRC to implement the recommendations. SECY-11-0124 and SECY-11-0137 established the staff's prioritization of the recommendations based upon the potential for each recommendation to enhance safety.

After receiving the Commission's direction in SRM-SECY-11-0124 (ADAMS Accession No. ML112911571) and SRM-SECY-11-0137 (ADAMS Accession No. ML113490055), the NRC staff conducted public meetings to discuss enhanced mitigation strategies intended to maintain or restore core cooling, containment, and SFP cooling capabilities following beyond-design-basis external events. At these meetings, the industry described its proposal for a Diverse and Flexible Mitigation Capability (FLEX), as documented in the Nuclear Energy Institute's (NEI's) letter, dated December 16, 2011 (ADAMS Accession No. ML11353A008). FLEX is proposed as a strategy to fulfill the key safety functions of core cooling, containment integrity, and spent fuel cooling. Stakeholder input influenced the staff to pursue a more performance-based approach to improve the safety of operating power reactors than was originally envisioned in NTTF Recommendation 4.2, SECY-11-0124, and SECY-11-0137.

On February 17, 2012, the NRC staff provided 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" (ADAMS Accession No. ML12039A103) to the Commission, including the proposed order to implement the enhanced mitigation strategies. As directed by SRM-SECY-12-0025 (ADAMS Accession No. ML120690347), the NRC staff issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML12073A195). On March 30, 2012, the Commission issued memorandum and Order CLI-12-09, "In the Matter of South Carolina Electric & Gas Co. and South Carolina Public Service Authority (Also Referred to as

Santee Cooper; Virgil C. Summer Nuclear Station, Units 2 and 3)," (ADAMS Accession No. ML12090A531), which includes the requirements for mitigation strategies as a license condition for Virgil C. Summer Nuclear Station, Units 2 and 3.

Guidance and strategies required by the Order would be available if the loss of power, motive force and normal access to the ultimate heat sink to prevent fuel damage in the reactor, and SFP affected all units at a site simultaneously. The Order requires 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 SFP 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.

On May 4, 2012, NEI submitted document 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision B (ADAMS Accession No. ML12128A124), and on May 13, 2012, Revision B1 (ADAMS Accession No. ML12143A232), to provide specifications for an industry-developed methodology for the development, implementation, and maintenance of guidance and strategies in response to the mitigating strategies Order. The strategies and guidance described in NEI 12-06 expand on the strategies the industry developed and implemented to address the limited set of beyond-design-basis external events that involve the loss of a large area of the plant due to explosions and fire required pursuant to paragraph (hh)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54, "Conditions of licenses."

PROPOSED ACTION

By this action, the NRC is requesting public comments on draft JLD-ISG-2012-01. This draft JLD-ISG proposes guidance related to requirements contained in Order EA-12-049, Mitigation Strategies for Beyond-Design-Basis External Events. The NRC staff will make a final determination regarding issuance of the JLD-ISG after it considers any public comments received in response to this request.

Dated at Rockville, Maryland, this 31st day of May, 2012.

FOR THE NUCLEAR REGULATORY COMMISSION.

/RA/

David L. Skeen, Director
Japan Lessons-Learned Project Directorate
Office of Nuclear Reactor Regulation

[FR Doc. 2012-13810 Filed 06/06/2012 at 8:45 am; Publication Date: 06/07/2012]