

**POLICY ISSUE**  
**(Information)**

March 27, 2015

SECY-15-0045

FOR: The Commissioners

FROM: Catherine Haney, Director  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: ISSUANCE OF GENERIC LETTER 2015-01, "TREATMENT OF  
NATURAL PHENOMENA HAZARDS IN FUEL CYCLE FACILITIES"

PURPOSE:

The purpose of this paper is to inform the Commission of the staff's intention to issue the enclosed Generic Letter (GL). Management Directive 8.18, "NRC Generic Communications Program" directs staff to prepare an information paper informing the Commission of the staff's intent to issue GLs. The GL would collect information regarding the treatment of natural phenomena event accident sequences in fuel cycle facilities and ensure that licensees are in compliance with existing regulatory requirements. This paper does not address any new commitments or resource implications.

SUMMARY:

GL 2015-01 (Agencywide Documents Access and Management System Accession No. ML15086A515) requests information from holders of Title 10 of the Code of Federal Regulations (10 CFR) Part 40 and 70 licenses for fuel cycle facilities.

The U.S. Nuclear Regulatory Commission (NRC) is issuing the GL for two purposes:

- (1) to request addressees to submit information to demonstrate compliance with regulatory requirements and applicable license conditions regarding the treatment of natural phenomena events in the facilities' integrated safety assessments; and

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- (2) to determine if additional NRC regulatory action is necessary to ensure that licensees comply with their licensing basis and existing NRC regulations.

The NRC's regulations in 10 CFR 40.31(b) and 10 CFR 70.22(d) require addressees to submit a written response to this generic letter (GL) and, if necessary, take appropriate action in accordance with 10 CFR 70.62(a)(1) to demonstrate compliance with the performance requirements of 10 CFR 70.61. This GL requires no other action.

#### BACKGROUND:

Fuel cycle facilities regulated under 10 CFR Part 70, Subpart H, "Additional Requirements for Certain Licensees Authorized to Possess a Critical Mass of Special Nuclear Material," are required to perform and maintain an Integrated Safety Analysis (ISA). Facilities that are currently licensed under 10 CFR Part 40 are required, through license conditions, to complete ISAs using methodologies, performance criteria, and staff guidance similar to 10 CFR Part 70 to evaluate relevant hazards and their associated accident sequences. The ISA must address potential accident sequences caused by process deviations or other events internal to the facility and credible external events, including natural phenomena. The regulations in 10 CFR 70.62(c)(1) also require, in part, identification of the consequence and the likelihood of occurrence of each potential accident sequence, and the methods used to determine the consequences and likelihoods.

In light of the lessons learned from the accident at the Fukushima Dai-ichi Nuclear Power Plant, the NRC staff performed a systematic evaluation and inspection of selected fuel cycle facilities. The inspections were performed to confirm that licensees were in compliance with regulatory requirements and facility-specific license conditions, and to evaluate their readiness to address natural phenomena hazards (NPH) events and other licensing bases events related to NPH. From December 2011 through May 2012, the staff conducted inspections at fuel cycle facilities licensed under 10 CFR Part 70, 10 CFR Part 40, and 10 CFR Part 76 in accordance with NRC Temporary Instruction (TI) 2600/015, "Evaluation of Licensee Strategies for the Prevention and/or Mitigation of Emergencies at Fuel Facilities."

As a result of the TI inspection activities, the staff identified unresolved items (URIs) at Part 70 licensees related to the current Part 70 requirements and the current licensing basis of these facilities. These URIs document the need to further evaluate whether licensees are in compliance with regulatory requirements regarding accident sequences as result of natural phenomena events.

#### DISCUSSION:

As a result of the inspections, the staff is issuing the GL due to the generic applicability of the URIs across the nuclear fuel facility industry. The NRC will use the information requested to evaluate licensees' compliance with NRC rules and regulations and relevant license conditions. Current NRC regulations require the evaluation of site hazards including natural phenomena events. However, knowledge of seismic design has evolved over time as new information regarding seismic hazards has become available. As a result, the licensing basis, design, and level of protection may differ among the existing operating fuel cycle facilities, depending on when the facility was constructed and what assumptions were used in the facilities' ISAs

developed to comply with the 10 CFR Part 70 Subpart H requirements or similar requirements imposed through license conditions at Part 40 facilities.

In an effort to fully assess the capabilities of these facilities to prevent or mitigate the consequences of natural phenomena events, the staff is requesting information from addressees to support a determination with regard to the proper evaluation of NPH impacts at the fuel cycle facilities. The GL requires responses from all holders of Part 40 or Part 70 licenses regarding the current level of NPH preparedness at their facilities. The information will enable the staff to determine whether licensees are in compliance with existing regulatory requirements regarding preparedness for NPH.

The staff intends to issue this GL on April 10, 2015.

COORDINATION:

The staff briefed the Advisory Committee on Reactors Safeguards (ACRS) and the Committee to Review Generic Requirements (CRGR) on the proposed GL on February 5, 2015, and February 26, 2015, respectively. The ACRS had no objection to the staff issuance of the proposed GL. The CRGR engaged in discussion with the staff and requested that the staff include stronger language to connect the information request to the appropriate regulatory requirements. The CRGR reviewed the modified version with the changes incorporated and concluded that it addressed the CRGR comments. Subsequently, the CRGR endorsed the revised GL for issuance.

The Office of General Counsel has reviewed this paper and the GL and has no legal objections to its content. The staff is working with the Office of Management and Budget to obtain a Paperwork Reduction Act Statement clearance.

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Enclosure:  
Draft GL 2015-01