

April 2, 2015

The Honorable James Inhofe  
Chairman, Committee on Environment  
and Public Works  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of March 4, 2015, in which you and seven of your Committee colleagues urge the agency to integrate the remaining post-Fukushima issues into the agency's ongoing work.

The agency continues to seek a balance between implementing lessons learned from Fukushima and the need to ensure that those efforts do not displace ongoing work of greater safety benefit, work that is necessary to maintain safety, or other higher-priority work. The majority of lessons learned activities have been transitioned back to the NRC's line organizations, and only four issues remain under the direct control of the Japan Lessons Learned Division. Additional information on this topic is included in our enclosed responses to your specific information requests.

Your letter also offered an endorsement of the NRC staff's recommendations in COMSECY-14-0037, "Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Re-Evaluation of Flooding Hazards." We appreciate receiving your views on this matter.

The Commission recently completed its evaluation of the staff's proposal in COMSECY-14-0037, and the Commission approved the first two staff recommendations.<sup>1</sup> However, the Commission did not endorse staff recommendation 3, i.e., that the NRC staff should revise the Near-Term Task Force Recommendation 2.1 flooding assessments and integrate the Phase 2 decision-making into the development and implementation of mitigating strategies in accordance with Order EA-12-049<sup>2</sup> and the related mitigation of beyond-design-basis events rulemaking. The Commission believes that the existing direction to address Recommendation 2.1 continues to represent the best approach on this issue.

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<sup>1</sup> 1) Licensees for operating nuclear power plants need to address the reevaluated flooding hazards within their mitigating strategies for beyond-design-basis external events, and 2) licensees for operating nuclear power plants may need to address some specific flooding scenarios that could significantly damage the power plant by developing targeted or scenario-specific mitigating strategies, possibly including unconventional measures, to prevent fuel damage in reactor cores or spent fuel pools.

<sup>2</sup> Order EA-12-049 directed power reactor licensees to develop, implement, and maintain guidance and strategies ("mitigating strategies") to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event.

At the same time, we recognize that additional insights gained since those initial safety enhancements were approved in 2012 indicate that some modification of our original direction is prudent. Therefore, instead of the path outlined in recommendation 3, the Commission directed the staff to reassess the guidance developed for the Phase 1 integrated (total plant) assessments to be performed at those plants with a reevaluated flood hazard that exceeds the current design basis. The guidance should:

- Include a graded approach for determining the need for, and prioritization and scope of, plant-specific integrated assessments so that those assessments focus on plants where there is the greatest opportunity for additional safety enhancements;
- Use resources judiciously, and be risk-informed and performance-based, to the extent practicable, to reduce any unnecessary conservatisms and identify any areas with insufficient conservatisms;
- Evaluate potential changes to the guidance to introduce more realism for the purpose of identifying potential safety enhancements for operating reactors;
- Focus on flood scenarios that could result in cliff-edge effects and where substantial safety benefits can be achieved, rather than on scenarios where limited risk improvements are expected; and
- Consider available physical margin data in order to assess the flooding vulnerability for each site.

The Commission also directed the staff to develop the acceptance criteria and guidance for Phase 2 of the flooding reevaluations to:

- Add clarity on how Phase 2 decisions about whether further regulatory actions are necessary will be made within the current regulatory process, including the Backfit Rule;
- Allow flexibility in the way in which licensees address vulnerabilities identified through the integrated assessment process that relied on hazards developed using guidance for new plants;
- Take into account the fact that the licensees are protecting mitigating strategies equipment from the reevaluated flood hazard developed in accordance with the 10 CFR 50.54(f) letter and the associated guidance; and
- Consider an appropriate balance between protection and mitigation based on the principle of defense-in-depth.

The Commission directed the staff to (1) work with licensees to expeditiously complete the flooding hazard reevaluations in order to ensure that flooding hazards are understood for every site, and (2) define the steps needed to complete agency actions in response to Recommendation 2.1 for flooding. Fifty-four of the 63 sites have submitted their flooding hazard reevaluations. Licensees for six of the remaining nine sites requested assistance with analysis related to upstream dam failures from the U.S. Army Corps of Engineers, through the NRC.

Licensees for the remaining three sites requested extensions of their submittal date to develop site-specific models or studies or to refine analysis for certain flood hazard scenarios.

Thank you for your interest in this important matter. I hope this letter and enclosure are responsive to your inquiry. If you need any additional information, please contact me or Mr. Eugene Dacus, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

**/RA/**

Stephen G. Burns

Enclosure:  
As stated

cc: Senator Barbara Boxer

Identical letter sent to:

The Honorable James Inhofe  
Chairman, Committee on Environment  
and Public Works  
United States Senate  
Washington, DC 20510  
cc: Senator Barbara Boxer

The Honorable David Vitter  
United States Senate  
Washington, DC 20510

The Honorable John Barrasso  
United States Senate  
Washington, DC 20510

The Honorable Shelley Moore Capito  
United States Senate  
Washington, DC 20510

The Honorable Mike Crapo  
United States Senate  
Washington, DC 20510

The Honorable John Boozman  
United States Senate  
Washington, DC 20510

The Honorable Jeff Sessions  
United States Senate  
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The Honorable Mike Rounds  
United States Senate  
Washington, DC 20510