

September 9, 2015

The Honorable Barbara Boxer  
Ranking Member, Committee on Environment  
and Public Works  
United States Senate  
Washington, DC 20510

Dear Senator Boxer:

During our May meeting, I committed to provide you with a status of the U.S. Nuclear Regulatory Commission (NRC) actions based on the lessons learned from the March 2011 accident at the Fukushima Dai-ichi nuclear power plant in Japan and the expected completion dates for these actions.

As you know, the NRC's Near-Term Task Force identified 12 overarching recommendations with 34 specific regulatory actions. An NRC steering committee recommended a subset of seven of the specific regulatory actions that should be initiated without delay. An eighth high priority action was later added. This prioritization represented those actions that would have the greatest potential for safety improvements in the near term, recognizing NRC's limited resources. The NRC has completed five of the eight specific regulatory actions. With limited exceptions, staff and industry are on track to meet the goal of completing actions necessary for the other three items by the end of 2016. The only exceptions are containment venting capabilities for 13 units and a few plants that have flood hazard reevaluations that are dependent on information to be provided by the U.S. Army Corp of Engineers.

Enclosure 1 contains the status of NRC Fukushima Lessons Learned Regulatory Actions. Please note that I have highlighted the eight high priority items. As you will see, some of eight high priority items are represented separately for different phases of implementation, for example, an order followed by rulemaking. We have also completed or started work on some of the items not on the high priority list. The NRC staff will be providing the Commission updated plans for addressing the other recommended regulatory actions later this year. The NRC staff's most recent status report is included in Enclosure 2 and provides additional detail on all of the NRC's Fukushima lessons-learned activities. Enclosure 3 is a Pacific Gas and Electric August 2015 status report on Diablo Canyon's implementation of the Commission Order for Mitigation Strategies for Beyond-Design-Basis External Events.

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If you have any questions or concerns regarding this matter, please feel free to contact Eugene Dacus, Director of the Office of Congressional Affairs at (301) 415-1776.

Sincerely,

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Stephen G. Burns

Enclosures:  
As stated

**Status Summary of Japan Lessons Learned Regulatory Actions  
July 2015**

The NRC staff will be sending a paper to the Commission by October 31, 2015, providing the plans for addressing items designated with an asterisk (\*) below.

ITEM	Near-Term Task Force (NTTF), Tier	Regulatory Action and Notes	Licensee Actions
Develop improved regulatory framework to better address beyond-design-basis events.	NTTF 1	Complete (incorporated into Risk Management Regulatory Framework activities)	N/A
Include ultimate heat sink (UHS) systems in hazard reevaluations and walkdowns, include loss of UHS as a design assumption in conjunction with strategies for dealing with prolonged station black out (SBO), and address loss of access to normal UHS in conjunction with measures taken to deal with beyond-design-basis external hazards.	Related to NTTF 2.1, 2.3, 4.1, and 4.2	Complete	Complete
Reevaluate seismic and flooding hazards against current requirements and guidance and update the design basis. Take appropriate regulatory action to resolve issues associated with updated site-specific hazards.	NTTF 2.1 Tier 1	In process- implementing action plan in COMSECY-15-0019 Closure Plan for the Reevaluation of Flooding Hazards For Operating Nuclear Power Plants <sup>1</sup>	In process- implementing action plan in COMSECY-15-0019
Periodic confirmation of seismic and flooding hazards.	NTTF 2.2 Tier 3	TBD*	TBD

<sup>1</sup> In this paper the staff provided for Commission review and approval an action plan, including a schedule, for closing NTTF Recommendation 2.1 Reevaluation of flooding hazards for operating nuclear power plants.

Perform seismic-and flood-protection walkdowns to verify compliance with existing seismic and flooding design bases.	<b>NTTF 2.3 Tier 1</b>	Complete	Complete
Potential enhancements to the capability to prevent or mitigate seismically-induced fires and floods.	NTTF 3 Tier 1/3	Feasibility study of a Probabilistic Risk Assessment (PRA) tool in progress.*	TBD
Rulemaking to codify requirements for capability to maintain plant safety throughout a prolonged station blackout (SBO) through mitigating strategies implemented above.	<b>NTTF 4.1 Tier 1</b>	Mitigation of Beyond-Design-Basis Event (MBDBE) Proposed Rule will be published for public comment by December 2015	2018-2019
Provide a three-phase approach for mitigating beyond-design-basis external events.	<b>NTTF 4.2 Tier 1</b>	Complete	2016
Provide a reliable hardened containment vent system for boiling-water reactor (BWR) Mark I and II containments. Was revised by SRM-SECY-12-0157 to address severe accident conditions.	<b>NTTF 5.1 Tier 1</b>	Complete	2018 (Phase 1) 2019 (Phase 2)
Containment Protection and Release Reduction Rulemaking. Incorporated assessment of filtration and additional severe-accident performance requirements for BWR Mark I and Mark II containments from SRM-SECY-12-0157.	<b>SECY-12-0025, Consideration of Additional Requirements for Containment Venting Systems for Boiling Water Reactors with</b>	Complete- Closed by Commission in August 2015 (SRM for SECY-15-0085 Evaluation of The Containment Protection and Release Reduction For Mark I and Mark II Boiling Water Reactors	N/A

	<b>Mark I and Mark II Containments Enc. 2, Tier 1<sup>2</sup></b>	Rulemaking Activities <sup>3</sup>	
Reliable hardened vents for other containment designs.	NTTF 5.2 Tier 3	TBD*	TBD
Hydrogen control and mitigation inside containment or in other buildings.	NTTF 6 Tier 3	TBD*	TBD
Provide a reliable indication of water level in spent fuel storage pools.	<b>NTTF 7.1 Tier 1</b>	Complete	2016
Require licensees to provide reliable spent fuel pool makeup capabilities.	NTTF 7.2 through 7.5 Tier 2	Complete	Incorporated in mitigating strategies
Require integration of onsite emergency response processes, procedures, training, and exercises.	<b>NTTF 8 Tier 1</b>	MBDBE Proposed Rule will be published for public comment by December 2015	2018-2019
Perform a staffing study for responding to multiunit events, evaluate enhancements that would be needed to power communications equipment throughout a prolonged SBO, and inform the NRC of the results.	<b>NTTF 9.3 (partial) Tier 1</b>	Complete	Incorporated in mitigating strategies
Require a revision to the emergency plan to address multiunit dose assessment, periodic training and exercises for multiunit and prolonged SBO scenarios, and drills on identification and acquisition of offsite resources, as well as to ensure sufficient emergency preparedness (EP) resources for multiunit and prolonged SBO scenarios.	NTTF 9.3 (partial) Tier 2	Complete	These items were either accomplished separately (e.g., multi-unit dose assessment) or incorporated in mitigating strategies

<sup>2</sup> In SRM SECY-12-0025 the Commission directed the NRC staff to proceed with development of technical bases and rulemaking for filtering strategies with drywell filtration and severe accident management of BWR Mark I and II containments.

<sup>3</sup> In SRM SECY-15-0085 the Commission disapproved the staff's plan to issue a *Federal Register* notice requesting public comments on the draft regulatory basis for the Containment Protection and Release Reduction rulemaking. The Commission directed staff to proceed with Order EA-13-109 implementation without additional regulatory actions. Order EA-13-109 requires all BWRs with Mark I or Mark II containments to have a reliable, hardened, severe-accident capable containment venting system.

Certain Tier 1, 2, and 3 EP activities (9.1, 9.2, 9.3 (with the exception of maintenance of Emergency Response Data System (ERDS) capability throughout an accident), 9.4, 10.2, and 11.1).	NTTF 9.1, 9.2, 9.3 (partial), 9.4, 10.2, 11.1	MBDBE Proposed Rule will be published for public comment by December 2015	2018-2019
EP enhancements for prolonged SBO and multiunit events.	NTTF 9–11 Tier 3	TBD*	TBD
ERDS capability.	NTTF 9–11 Tier 3	TBD*	TBD
Additional EP topics for prolonged SBO and multiunit events.	NTTF 9–11 Tier 3	TBD*	TBD
EP topics for decision-making, radiation monitoring, and public education.	NTTF 9–11 Tier 3	TBD*	TBD
Complete the ERDS modernization initiative by June 2012 to ensure multiunit site monitoring capability.	<b>NTTF 9.4 Tier 1</b>	Complete	Complete
Reactor Oversight Process (ROP) modifications to reflect the recommended defense-in-depth framework.	NTTF 12.1 Tier 3	The NRC staff is identifying and evaluating improvements to the ROP based on insights from implementing the other recommendations.*	N/A
Staff training on severe accidents and resident inspector training on severe-accident management guidelines.	NTTF 12.2 Tier 3	Under development/ partially implemented.*	N/A
Reevaluate natural external hazards, other than flooding and seismic, against current requirements and guidance and update the design basis. Take appropriate regulatory action to resolve issues associated with updated site-specific hazards.	Tier 2	TBD*	TBD
Reactor and containment instrumentation capable of withstanding beyond-design-basis	Advisory Committee on Reactor	NRC staff continues to work with the standards	TBD

conditions.	Safeguards item Tier 3*	development organizations to develop criteria for severe accident instrumentation.*	
Basis of emergency planning zone size.	Staff item Tier 3	TBD*	TBD
Pre-staging of potassium iodide beyond 10 miles.	Staff item Tier 3*	TBD*	TBD
Expedited transfer of spent fuel to dry cask storage.	Additional issue	Complete	N/A
Determine applicability of lessons learned to regulated facilities other than power reactors.	Additional issue	Complete	N/A