

**Status Summary of Fukushima Lessons-Learned Regulatory Actions
June 2016**

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 Not in a Tier	Complete – Closed by the Commission in May 2014 (SRM for SECY-13-0132, “U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition of Recommendation 1 of the Near-Term Task Force Report”).	None required
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 blackout (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 Tier 1	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	On schedule. All licensees have received feedback on their seismic hazards and over 80% on their flooding ¹ hazards.	In process and on schedule. Most licensees will complete mitigating strategy assessments for the reevaluated hazards by December 2016 ² .

¹ For a limited number of licensees, review of the reevaluated flood hazard may extend past December 2016 because of dependency on information from the U.S. Army Corps of Engineers or because of site-specific technical considerations.

² For a limited number of licensees, final regulatory decision-making is pending the completion of flood hazard integrated assessments (to be completed by December 2018) or seismic hazard probabilistic risk assessments (to be completed by December 2019), as appropriate.

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Periodic confirmation of seismic and flooding hazards.	NTTF 2.2 Tier 3	Expanded to include natural hazards other than seismic and flooding. Process is under development and on schedule. NRC staff will provide the final process to the Commission in December 2016.	TBD
Perform seismic- and flood-protection walkdowns to verify compliance with existing seismic and flooding design bases.	NTTF 2.3 Tier 1	Complete	Complete
Evaluate potential enhancements to existing capabilities to prevent or mitigate seismically-induced fires and floods.	NTTF 3 Tiers 1, 3	Complete	None required
Rulemaking to codify requirements for capability to maintain plant safety throughout a prolonged SBO through mitigating strategies implemented above.	NTTF 4.1 Tier 1	Mitigation of Beyond-Design-Basis Events (MBDBE) final rule is on schedule and will be provided to the Commission for approval by December 2016.	In process and on schedule. Licensee implementation expected to be complete in 2018-2019.
Provide a three-phase approach for mitigating beyond-design-basis external events.	NTTF 4.2 Tier 1	Complete	In process and on schedule. The majority of licensees will be in full compliance by the end of 2016 ³ .

³ Eight sites have been granted extensions to align full implementation of their mitigating strategies with the hardened containment vent orders. For these eight sites, all aspects of the mitigating strategies order that do not depend on the installation of the hardened vents will be fully implemented by December 2016.

Item	Near-Term Task Force (NTTF) Tier	Regulatory Action and Notes	Licensee Actions
Provide a reliable hardened containment vent system for boiling-water reactor (BWR) Mark I and II containments. Revised by the staff requirements memorandum (SRM) to SECY-12-0157 to address severe accident conditions.	NTTF 5.1 Tier 1	Complete	In process and on schedule. Phased implementation with compliance beginning in late 2016 and ending in mid-2019 ⁴ .
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 the SRM to SECY-12-0157.	Staff item ⁵ Tier 1	Complete – Closed by the Commission in August 2015 (SRM for SECY-15-0085, “Evaluation of the Containment Protection for Mark I and Mark II Boiling Water Reactors”).	None required
Evaluate the need for reliable hardened vents for other containment designs.	NTTF 5.2 Tier 3	Complete	None required
Evaluate the need for enhancements for hydrogen control and mitigation inside containments or in other buildings.	NTTF 6 Tier 3	Complete	None required
Provide a reliable indication of water level in spent fuel storage pools.	NTTF 7.1 Tier 1	Complete	In process and on schedule. Expected to be complete by the end of 2016 ⁶ .

⁴ Two sites have requested extensions for implementation of this Order due to current plans to permanently cease operations. An extension was granted for Oyster Creek Nuclear Generating Station. The extension request for Pilgrim Nuclear Power Station is under review by NRC staff. An additional site (Hope Creek Generating Station) has requested a modification for implementation of the Order, which is under review by NRC staff.

⁵ In the SRM to 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. The analyses completed for this rulemaking concluded that filters are not justified in light of their very low safety benefit and the rulemaking activity was subsequently closed. As noted in the chart, the Commission subsequently voted to terminate this rulemaking as reflected in the SRM for SECY-15-0085.

⁶ One site (Fitzpatrick Nuclear Power Plant) has requested an extension for implementation of this order due to current plans to permanently cease operations. The request is under review by NRC staff.

Item	Near-Term Task Force (NTTF) Tier	Regulatory Action and Notes	Licensee Actions
Require licensees to provide reliable spent fuel pool makeup capabilities.	NTTF 7.2-7.5 Tier 2	Complete	In process and on schedule. Expected to be complete by the end of 2016.
Require integration of onsite emergency response processes, procedures, training, and exercises.	NTTF 8 Tier 1	MBDBE final rule includes this requirement. The rule is on schedule and will be provided to the Commission for approval in December 2016.	Final rule implementation expected in 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.	NTTF 9.3 (partial) Tier 1	Complete	In process and on schedule. Expected to be complete in 2016.
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	In process and on schedule. Expected to be complete in 2016.
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 Tiers 1, 2, 3	MBDBE final rule includes these requirements. The rule is on schedule and will be provided to the Commission for approval in December 2016.	Final rule implementation expected in 2018-2019.

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Assess the need for EP enhancements for prolonged SBO and multiunit events.	NTTF 9–11 Tier 3	Complete	None required
Evaluate additional enhancements to ERDS capabilities.	NTTF 9–11 Tier 3	Complete	None required
Evaluate additional EP topics for prolonged SBO and multiunit events.	NTTF 9–11 Tier 3	Complete	None required
Evaluate additional EP topics associated with decision-making, radiation monitoring, and public education.	NTTF 9–11 (except 11.3) Tier 3	Complete	None required
Evaluate the efficacy of real-time radiation monitoring.	NTTF 11.3 Tier 3	In process and on schedule. NRC staff will provide their final evaluation to the Commission in December 2016.	TBD
Complete the ERDS modernization initiative by June 2012 to ensure multiunit site monitoring capability.	NTTF 9.4 Tier 1	Complete	Complete
Reactor Oversight Process modifications to reflect the recommended defense-in-depth framework.	NTTF 12.1 Tier 3	Complete	None required
Staff training on severe accidents and resident inspector training on severe-accident management guidelines.	NTTF 12.2 Tier 3	Complete	None required

Item	Near-Term Task Force (NTTF) Tier	Regulatory Action and Notes	Licensee Actions
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.	Advisory Committee on Reactor Safeguards (ACRS) and Congressional item Tier 2	In process and on schedule. NRC staff completed an initial screening and will provide their final evaluation to the Commission in December 2016.	TBD
Evaluate the need for reactor and containment instrumentation capable of withstanding beyond-design-basis conditions.	ACRS item Tier 3	Complete	None required
Reevaluate the basis of emergency planning zone size.	Staff item Tier 3	Complete	None required
Evaluate the need to pre-stage potassium iodide beyond 10 miles.	Staff item Tier 3	Complete	None required
Evaluate the need to expedite transfer of spent fuel to dry cask storage based on insights from the accident.	Staff item Not in a Tier	Complete	None required
Determine applicability of lessons learned to regulated facilities other than power reactors.	Staff item Not in a Tier	Complete	None required