

Status of Fukushima Lessons Learned Actions

**Joint Steering Committee Meeting
July 27, 2012**

Agenda

- **NRC Welcome and Opening Remarks**
- **Industry Opening Remarks**
- **Open Discussion**
- **Public Comments**

Purpose

- **Discuss Tier 1 Issues and Status**
- **Discuss Path Forward on Resolution of Issues**

Order for Mitigating Strategies for Beyond-Design-Basis External Events

- **Topics for further discussion**
 - **Consensus Standards**
- **August 31 – Issue Final ISG**

Order for Reliable Hardened Vents

- **No identified topics for further discussion**
- **August 31 – Issue Final ISG**

Order for Reliable Spent Fuel Pool Instrumentation

- **No identified topics for further discussion**
- **August 31 – Issue Final ISG**

Schedule Overview – Guidance for Requests for Information

50.54(f) Request	Guidance Issued or Endorsed
Flooding Reevaluation Prioritization Letter	May 11, 2012 (Complete)
Seismic/Flooding Walkdown Guidance	May 31, 2012 (Complete)
Seismic/Flooding Reevaluations (Integrated/Risk Assessment Guidance)	November 30, 2012
Emergency Preparedness – Communications and Staffing	May 14, 2012 (Complete)

Seismic and Flooding Walkdowns

- **Walkdowns**
 - Guidance endorsed on May 31, 2012
 - Seismic and flooding walkdowns have commenced
 - Walkdown reports due on November 27, 2012
- **NRC Staff Action**
 - Temporary Instruction issued
 - Inspector training completed
 - Inspections being conducted

Seismic Reevaluations

- **Topics for Further Discussion**
 - Spent fuel pool evaluation
 - Relationship to flooding reevaluation schedules
- **Screening and Prioritization Guidance**
 - 90 day responses
 - Guidance development continues

Flooding Reevaluations

- **Topics for Further Discussion**
 - Flood induced loss of ultimate heat sink
 - Relationship to seismic reevaluation schedules
- **Integrated Assessment Guidance development continues**

Emergency Preparedness – Staffing and Communications

- **No identified topics for further discussion**
- **NRC approved all alternative schedules for responding to RFI**

Rulemaking Activities

- **Station Blackout Rule**
 - Comment period related to Advance Notice of Proposed Rulemaking (ANPR) closed May 4; staff reviewing feedback
 - Staff continues work to develop regulatory basis
 - Final rule due April 2014
- **Integration of EOPs, SAMGs, and EDMGs**
 - Comment period related to ANPR closed June 18; staff reviewing feedback
 - Staff continues work to develop regulatory basis
 - Final rule due May 2016

Filtered Vent Issue

- **Topics for further discussion**
 - Industry research efforts on alternatives
- **Encourage industry to engage in discussions**
- **Staff recommendation to Commission**
 - Schedule extension requested to November 2012

Recommendation 1

- **First Public Meeting Held on June 20, 2012**
 - Staff explained framework options under consideration
 - Staff requested stakeholder input on additional options to be considered
- **NEI Letter was received by NRC**
- **Next Steps:**
 - Fall/Winter 2012 – Public meetings to discuss the pros/cons of each option including engagement with ACRS
 - February 2013 – SECY paper on Recommendation 1 due to the Commission

Tier 3 Path Forward

- **Plans to address Tier 3 issues have been provided to the Commission (SECY-12-0095)**
- **Decision for regulatory action based on results**
- **NRC is moving forward on implementing plans**
- **Encourage industry to engage in evaluating issues**

Joint Steering Committee Successes and Challenges

- **Fourth NRC-Industry Steering Committee Meeting**
 - **Successes**
 - **Challenges**
 - **Future Efforts**

BACKUP SLIDES

Brief History

- **July 2011**
 - Near-Term Task Force (NTTF) report issued
- **September/October 2011**
 - NTTF recommendations prioritized
- **March 2012**
 - Tier 1 orders and requests for information issued
- **July 2012**
 - Tier 3 program plans issued

Tier 1 Activities

- **Orders**
 - EA-12-049 – Mitigating strategies beyond design basis events
 - EA-12-050 – Hardened vents for Mark I and II containments
 - EA-12-051 – Spent fuel pool instrumentation
- **Request for Information under 50.54(f)**
 - Seismic and flooding walkdowns
 - Seismic and flooding reevaluations
 - Enhanced EP staffing and communications
- **Rulemakings**
 - Station blackout (SBO)
 - Integration of emergency procedures

Tier 2 Recommendations

- **Spent fuel pool makeup capability – Order licensees to:**
 - Provide safety-related AC electrical power for SFP makeup
 - Revise TS to require one train of onsite emergency electrical power be operable for SFP makeup and SFP instrumentation whenever irradiated fuel is in the SFP
 - Have an installed means to spray water into the SFP, including an easily accessible connection to supply the water.
- **Emergency preparedness – Require licensees to:**
 - Have guidance for multiunit dose assessment capability
 - Hold training and exercises for multi unit and prolonged SBO scenarios
 - Practice the identification and acquisition of offsite resources
 - Ensure that sufficient EP equipment and facilities exist to deal with multiunit and prolonged SBO scenarios,
- **Reevaluation of other external hazards**
 - Request licensees reevaluate external hazards (other than seismic and flooding)

Tier 3 Recommendations

- 2.2 Ten-year confirmation of seismic and flooding hazards
 - 3 Potential enhancements to the capability to prevent or mitigate seismically induced fires and floods
- 5.2 Reliable hardened vents for other containment designs
 - 6 Hydrogen control and mitigation inside containment or in other buildings
- 9.1/9.2 Emergency preparedness (EP) enhancements for prolonged SBO and multiunit events
 - 9.3 ERDS capability
 - 10 Additional EP topics for prolonged SBO and multiunit events
 - 11 EP topics for decision-making, radiation monitoring, and public education
- 12.1 Reactor Oversight Process modifications to reflect the recommended defense-in-depth framework
- 12.2 Staff training on severe accidents and resident inspector training on SAMGs
 - Basis of Emergency Planning Zone Size (Additional Issue)
 - Prestaging of potassium iodide beyond 10 mile (Additional Issue)
 - Transfer of spent fuel to dry cask storage (Additional Issue)
 - Reactor and Containment Instrumentation (Additional Issue)

Schedule Overview – Orders

Milestone	Operating Reactors	Combined License Holders	Construction Permit Holders
Guidance Issued	August 31, 2012	August 31, 2012	August 31, 2012
1st Update	October 31, 2012	October 31, 2012	October 31, 2012
Plan Submitted	February 28, 2013	August 31, 2013	August 31, 2013
Periodic Updates	Every six months	Every six months	Every six months
Latest Completion	December 31, 2016	Prior to initial fuel load	Prior to receipt of operating license

Schedule Overview – 50.54(f) Letter Seismic & Flooding Reevaluations

Milestone	Operating Reactors and Construction Permit Holders
Guidance Issued	November 30, 2012
Initial Response	January 30, 2013
Licensee Seismic Hazard Evaluations Due	September 9, 2013 (CEUS) / March 9, 2015 (WUS)
Licensee Flooding Hazard Evaluations due	March 9, 2013 – March 9, 2015 (based on May 11, 2012 prioritization letter)
Future Steps	Pending NRC evaluation and prioritization, with completion of evaluations for all facilities between October 2016 and April 2019

Schedule Overview – 50.54(f) Letter Seismic & Flooding Walkdowns

Milestone	Operating Reactors
Guidance Endorsed by NRC	May 31, 2012
Licensees Identified Walkdown Procedures To Be Used	June 11, 2012 (flooding) July 9, 2012 (seismic)
Licensees Provide Results of Walkdowns	November 27, 2012 (180 days after NRC-endorsement of guidance)

Schedule Overview – 50.54(f) Letter E.P. – Staffing and Communications

Milestone	Operating Reactors, Combined License Holders, and Construction Permit Holders
Mitigating Strategies Order – Guidance Issued or Endorsed	August 31, 2012
Licensee Responses	June 8, 2012 (communications)
	June 8, 2012 (staffing items 3 through 6)
	October 31, 2012 (staffing items 1 and 2)*

* 60 days after issuance of guidance associated with mitigating strategies order