



U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NTTF Recommendation 2.1

Seismic

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Office of New Reactors



Today's Agenda

NRC

- Status of Central and Eastern United States (CEUS) seismic hazard reviews
- Western US (WUS) submittals review plans
- Status of Expedited Seismic Evaluation reviews

NEI

- High frequency evaluation presentation
- Spent fuel pool evaluation plans

NRC

- Public comments and questions



Status of Seismic Hazard Reviews



Seismic Hazard Review Update

Overview

- Screening decision completed
- Licensee RAI responses received
- Licensee supplements expected for 4 sites
- Staff Assessment progress and schedules

RAI - Requests for Additional Information



CEUS Screening reviews complete

Screening letters have been issued for remaining screened-in plants (since Nov 2014)

- Arkansas 1 & 2 (11/21/14, ML14246A428)
- Millstone 2 (11/21/14, ML14246A428)
- FitzPatrick (12/31/14, ML14323A027)



Seismic Hazard RAIs and Supplements

- Licensee RAI Responses appear satisfactory
- Staff assessment documentation in process
- Supplements are expected for Cooper, Robinson, Oconee, and VC Summer sites
 - Supplement from Cooper planned for Feb 2015
 - Supplement for remaining sites expected in Apr/May 2015
 - Staff assessments on hold pending receipt
 - Staff goal remains to complete reviews by October 2015 provided supplements are complete and timely



Seismic Hazard Staff Assessments

- Staff continues to make progress
- NRC review will document suitability of seismic hazard for use in seismic risk evaluations
- Staff assessment (SA) issuance target and progress
 - Group 1 – May 2015 (SAs drafted for 8 of 10)
 - Group 2 – June 2015 (SAs in progress)
 - Group 3 – July 2015 (SAs in progress)
 - Screened-out – Aug/Sept 2015 (SAs in progress)

* Seismic review groups defined by May 9, 2014 letter (ML14111A147)



WUS Hazard Reevaluation Reviews

- December 4, 2014 Public Meeting
 - Meeting Summary (ADAMS ML14342A901)
- NRC to issue a screening or response letter following the March 12, 2015 submittals
- NRC expects licensee to submit interim evaluations for plants with seismic exceedance
- Review for WUS sites will require 12 to 18 months depending on priority and complexity



Seismic Hazard Review Milestones

- CEUS Site Screening Letters (completed)
- Group 1, 2, and 3 site NRC RAI sent (completed)
- December 10, 2014 letter to licensees on use of hazard for risk evaluations (completed)
- WUS Reevaluated Hazard Reports (March 2015)
- WUS Screening and Interim Evaluation Letter (Apr 15)
- Issuance of Staff Assessment for CEUS Hazards by Group (May 2015 through September 2015)



Status of Expedited Seismic Evaluation Process (ESEP) Review



ESEP Review

- Overview of ESEP Review Plan
- ESEP Review Progress
- List of Review Batches by Plant
- ESEP Response Letter
- ESEP Relief Letter for plants with IPEEE capacity



ESEP Review Structure

- Four Reviews Batches
 - Batch 1 – 3 primarily based on seismic priority group, modifications, and reactor types
 - Batch 4 is planned for the 3 western sites (as needed)

Expected ESEP Response Letter Dates

- Batch 1: 2nd Quarter 2015
- Batch 2: 3rd Quarter 2015
- Batch 3: 1st Quarter 2016
- Batch 4: 2nd Quarter 2016



ESEP Review Progress

- December 2014
 - 33 licensee submittals received*
- January 2015
 - Complete decision on batches and prioritization
 - Review teams beginning with Batch 1 plants
- February 2015
 - Audit letter dated February 10, 2015 (ML14356A003)
 - Review teams to identify items to clarify or audit for Batch 1
- March 2015 – Development of Inputs for Response Letters

* Cooper ESEP Report due by May 1, 2015 per NRC Letter (ML14273A259)



Batch 1

- Hatch 1 & 2
- Peach Bottom 2 & 3
- Dresden 2 & 3
- Pilgrim
- Watts Bar 1 & 2
- Catawba 1 & 2
- Vogtle 1 & 2
- Indian Point 2 & 3
- VC Summer
- North Anna 1 & 2
- Oconee 1, 2, & 3
- Fermi



Batch 2

- Browns Ferry 1, 2, & 3
- Monticello
- LaSalle 1&2
- D.C. Cook 1&2
- Sequoyah 1&2
- Callaway
- Wolf Creek
- Beaver Valley 1&2
- H. B. Robinson
- Palisades
- Calvert Cliffs 1&2



Batch 3

- FitzPatrick
- Brunswick 1&2
- Oyster Creek
- Perry 1
- McGuire 1&2
- Seabrook
- Point Beach 1&2
- Three Mile Island 1
- Davis Besse
- Cooper



ESEP Review Letter Considerations

- Whether licensees met the intent of the Expedited Approach Guidance
- Fulfilled interim evaluation or action consistent with the 50.54(f) letter dated March 12, 2012*
- Consider whether interim evaluation provides additional assurance of plant safety while plant seismic risk evaluations are conducted

* ML12053A340 – March 12, 2012, 50.54(f) request regarding Recommendation 2.1, 2.3, and 9.3, of the Near-Term Task Force review



ESEP Relief Letter

- Six licensee sites informed NRC of plans not to submit an ESEP Report during the 2nd half of 2014
- By letter dated December 15, 2014, NRC acknowledged the licensee commitment change providing relief from submitting the ESEP based on previously demonstrated plant seismic capacity (ML14310A033)
- Encouraged licensee efforts in evaluating corrective actions related Mitigation Strategies to the higher seismic hazard
- Potential for agency decisions that may require licensees to ensure equipment used in Mitigation Strategies are robust to the higher hazard (if applicable and necessary)



Limited Scope Evaluations or Confirmations



High Frequency Confirmations

- SPRAs will address high frequency
- NEI/EPRI proposal reduces review scope
- Continued development and discussion on implementing guidance is expected

SPRA – Seismic Probabilistic Risk Assessment



Spent Fuel Pool Evaluation Discussion



Key Messages and Next Steps



Key Messages

- Progress continues on NTTF 2.1 Seismic
- Adherence to the agreed upon guidance important to efficiencies
- Continue efforts with development of high frequency and spent fuel pool implementing guidance
- Continue plant specific communications with JLD Project Managers on review issues and timelines



Upcoming NTTF 2.1 Seismic Activities

- Further Development of High-Frequency Evaluation Implementing Guidance (Winter/Spring 2015)
- Western Reevaluated Hazards Reports Submittals (March 2015)
- WUS Screening and Prioritization Determination (May/April 2015)
- Spent Fuel Pool Evaluation Implementing Guidance (Spring/Summer 2015)



Upcoming NTTF 2.1 Activities (cont.)

- Issuance of Staff Assessment of Reevaluated Hazards (May 2015 to September 2015)
- Issuance of ESEP Response Letter (Q2 2015 to Q2 2016)



Public Questions or Comments?



Backup Slide



List of Updated CEUS Screening Letters

- ANO – ML14246A428
- Brunswick – ML14231A964
- Clinton – ML14258A043
- Cooper – ML14273A259
- Duane Arnold – ML14198A070
- Fitzpatrick – ML14323A027
- Fort Calhoun – ML14224A526
- Limerick – ML14258A043
- Millstone – ML14246A428
- Monticello – ML14210A030
- Oyster Creek – ML14307A638
- Quad Cities – ML14258A043
- Salem – ML14258A043
- Surry - ML14258A043