



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 17, 2017

MEMORANDUM TO: Michael X. Franovich, Acting Director
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

FROM: Kevin M. Roche, Reactor Systems Engineer */RA/*
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF FEBRUARY 03, 2017, PUBLIC JOINT STEERING
COMMITTEE MEETING TO DISCUSS ACTIVITIES RELATED
TO LESSONS LEARNED FROM THE FUKUSHIMA DAI-ICHI
NUCLEAR POWER PLANT EVENT

On February 03, 2017, a Category 2 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) Steering Committee and the industry's counterpart steering committee for implementing the lessons-learned from the events at Fukushima Dai-ichi. The meeting was held in the Commission Hearing Room, 11555 Rockville Pike, Rockville, Maryland. The NRC slides used in the meeting are available at Agencywide Documents Access and Management System (ADAMS) Accession No. ML17032A150. A list of participants is provided as an enclosure to this document.

The NRC staff presentation began with an implementation status update of the progress in all of the major post-Fukushima activities including mitigating strategies, hazard reevaluations, and hardened vents. This was followed by more in depth discussions on the mitigation of beyond-design-basis events (MBDBE) rulemaking, Tier 2 and 3 recommendations, credit for FLEX in other regulatory applications, and Maintenance Rule guidance related to mitigating strategies. The final topic of discussion was on future joint steering committee interactions and Fukushima lessons-learned.

Highlights of the discussion included:

- The current implementation progress of all of the major post-Fukushima activities. This included an update that all onsite audits supporting the mitigating strategies order are complete and nearly 85 percent of the units are now in compliance with the order. Over 99 percent of the units are in compliance with the spent fuel pool instrumentation order. The staff is ahead of schedule in implementing the hardened vents order and all Phase 2 interim staff evaluations have been issued except Quad Cities Nuclear Power Station, Units 1 and 2 (Quad Cities), which will be issued later this year because of uncertainty surrounding the future operation of the plant.

The key message was that the NRC remains on or ahead of schedule for all activities and there is a well-established path forward for the remaining activities.

- The staff discussed several topics in more detail including mitigating strategies, hazard reevaluations, and hardened vents:
 - Mitigating strategies: The staff completed all of the onsite audits, has issued 34 of the 61 safety evaluations (SEs). The regions have completed 16 temporary instruction (TI) – 191 inspections to date with no significant issues identified. The staff from both HQ and the regions will attend the industry workshop on Mitigating Strategies implementation in March to engage with industry so any lessons learned can be incorporated into future inspections going forward.
 - Hazard reevaluations: For flooding, the NRC has issued 59 of 61 hazard acceptance letters summarizing the staff's review of the sites reevaluated flooding hazard and informing the licensee that the levels are acceptable for use in future evaluations and submittals. The staff has reviewed 10 of 61 reevaluated flooding hazard mitigating strategies assessments (MSAs) and 22 reevaluated seismic hazard MSAs. Furthermore, 20 sites have now completed their recommendation 2.1 seismic response. Eighteen sites are expected to submit seismic probabilistic risk assessments. This number is down from 20 because McGuire Nuclear Station, Units 1 and 2 and Catawba Nuclear Station, Units 1 and 2, provided additional information to the staff, such that, the staff agreed they no longer needed to submit a seismic probabilistic risk assessment. The staff has developed guidance for Phase 2 decision making and the final guidance was submitted to the Commission September 2016. The staff noted that that a subset of licensees intend to revise their flooding hazard as part of either their MSA, focused evaluation, or integrated assessment. The staff will perform a level of review commensurate with the scope of the change and analysis method. Continued management focus will ensure that the review of these hazard refinements is completed in a timely manner, such that compliance with the MBDBE rulemaking isn't unnecessarily impacted.
 - Hardened Vents: The staff issued all of the Phase 2 interim staff evaluations (ISEs) ahead of schedule except Quad Cities as noted above. The staff is working with industry to implement a streamlined process for closure of this order. The approach will use existing communications, such as the 6-month updates and compliance letters, to expedite the closure of open items. This will enable development of the staff's SE ahead of plant compliance. The staff has reached out to industry to gain alignment on the process. The streamlined approach will also allow for post-compliance inspections to be scheduled earlier. The staff is currently developing a post-compliance inspection plan that will be drafted and shared publicly later this year.
- The staff gave an update on the MBDBE rulemaking, which was submitted to the Commission in mid-December. The staff noted that the rule was enhanced by

external and internal stakeholder feedback received during the extensive outreach conducted while drafting the rule. Because the rule requires an integrated response capability, licensees can apply for a flexible implementation schedule if they deem it necessary.

- The staff also included guidance for phasing out requirements for decommissioning reactors to avoid the need for future exemptions. Additionally, the staff will remove redundant requirements (orders and license conditions) once the rule is finalized to avoid confusion. Lastly, the staff was forced to closely examine the rule while resolving staff non-concurrences. The rule will be finalized later this year pending Commission direction
- The staff discussed the remaining Tier 2 and 3 recommendations including recommendation 11.3 real-time radiation monitoring, evaluation of other natural hazards, and recommendation 2.2 periodic reconfirmation. Resolution plans for these remaining Tier 2 and 3 recommendations were submitted to the Commission in December 2016. The staff did not find a need for additional action for real-time radiation monitoring. Furthermore, the staff have developed a proposed process to address recommendation 2.2 in a systematic approach. The process leverages and enhances existing NRC processes and programs to more efficiently accomplish the objective of recommendation 2.2 than the originally planned rulemaking.
- Staff from the Division of Risk Assessment (DRA) discussed credit for FLEX in other regulatory applications. Industry submitted guidance to the staff in December 2015. After numerous interactions, the NEI submitted revised guidance and the staff followed up with a letter outlining how the staff would use the submitted guidance. The industry submitted NEI 16-06, "Crediting Mitigating Strategies in Risk-Informed Decision Making," which the staff is currently reviewing for future use. The staff identified existing internal guidance already could be used for these applications. However, additional amplifying guidance will increase the efficiency and effectiveness of these reviews. The staff is developing notice of enforcement discretion guidance that applies to mitigating strategies equipment. Additionally, the license amendment requests are reviewed by DRA when mitigating strategies are used as compensatory measures. The staff also emphasized the importance of internal communication to ensure the staff consistency when crediting mitigating strategies.
- Staff from the Division of Inspection and Regional Support (DIRS) discussed mitigating strategies and the maintenance rule. Staff held a public meeting with industry on January 18, 2017, during which the position that mitigating strategies equipment used for mitigation of beyond design bases accident is outside the scope of the maintenance rule was outlined. However, mitigating strategies equipment used for mitigation of design bases accident would require an appropriate technical basis to demonstrate that these changes do not impede the successful implementation of other structures, systems and components credited in the emergency operating procedure. The industry has since submitted an update to the maintenance rule guidance and staff is working to update internal guidance and the regulatory guide that endorses the industry guidance.

- The last discussion topic was the remaining Tier 1 work. The short-term remaining work encompasses completing the mitigating strategies and vent order SEs and inspections. Longer-term staff still needs to review the licensee responses reevaluated flooding and seismic hazards. Given the significant progress in implementing the Fukushima lessons-learned, there are fewer issues requiring the attention of the joint steering committee. Therefore, the staff is anticipating sun setting the NRC's internal Fukushima lessons-learned steering committee following this meeting. The staff outlined the plan to merge the lessons-learned division with another division within NRR office structure. Lastly, the staff will continue to emphasize knowledge management and transfer as the staff completes the remaining work.

Members of the public were in attendance in the room and through the teleconference. Public meeting feedback forms were not received.

Please direct any inquiries to me at 301-415-1554 or Kevin.Roche@nrc.gov.

Enclosure:
List of Participants

SUMMARY OF FEBRUARY 03, 2017, PUBLIC JOINT STEERING COMMITTEE MEETING TO DISCUSS ACTIVITIES RELATED TO LESSONS LEARNED FROM THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT EVENT DATED February 17, 2017

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OFFICIAL AGENCY RECORD

LIST OF ATTENDEES

FEBRUARY 3, 2017

JOINT STEERING COMMITTEE MEETING TO DISCUSS ACTIVITIES RELATED TO LESSONS
LEARNED FROM THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT EVENT

The participants from the NRC included:

- Michael Johnson, Deputy Executive Director for Operations
- William Dean, Director, Office of Nuclear Reactor Regulation (NRR)
- Michael Franovich, Acting Director, Japan Lessons-Learned Division (JLD), NRR
- Sunil Weerakkody, Branch Chief, Division of Risk Assessment, NRR
- Michael King, Deputy Director, Division of Inspection and Regional Support, NRR
- Andrew Proffitt, Technical Assistant, JLD, NRR

The participants from the industry included:

- Joseph Pollock, Vice President, Nuclear Operations, Nuclear Energy Institute (NEI)
- Andrew Mauer, Sr. Project Manager, Risk Assessment, NEI
- Michael Tschiltz, Director, Risk Assessment, NEI

Additional NRC staff members, industry representatives, and members of the public were in attendance in person or through the teleconference

Enclosure