October 23, 2012

MEMORANDUM TO: Matthew A. Mitchell, Chief
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Japan Lessons-Learned Project Directorate
Office of Nuclear Reactor Regulation

FROM: David H. Jaffe, Senior Project Manager ***/RA/***
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SUBJECT: SUMMARY OF OCTOBER 16, 2012, PUBLIC MEETING ON IMPLEMENTATION OF NEAR-TERM TASK FORCE RECOMMENDATION 9.3, EMERGENCY PREPAREDNESS REGULATORY ACTIONS

On October 16, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting[1] with the Nuclear Energy Institute (NEI) and industry representatives to discuss addressing the recommendations in the *Near-Term Task Force* [NTTF] *Recommendations for Enhancing Reactor Safety in the 21st Century* report, issued July 12, 2011.[2] A meeting attendance list is shown in Enclosure 1. This was the second of three public meetings conducted to obtain stakeholder feedback regarding the implementation of the Tier 2 requirements of NTTF Recommendation 9.3. The meeting was focused on emergency preparedness equipment and facilities and emergency preparedness training and exercise. Public participation was invited via meeting attendance, telephone conference, and Web-based seminar.

The NRC staff revisited the presentation from the October 3, 2012, public meeting[3] to again address the various elements of the Tier 2 requirements of NTTF Recommendation 9.3, and demonstrate how most of the requirements overlapped with the Tier 1 requirements of NTTF Recommendation 4.2. The presentation identified the Tier 2 requirements of NTTF Recommendation 9.3 not addressed under the Tier 1 requirements of NTTF 9.3, and suggested how these requirements might be addressed. The remainder of the meeting centered around an NEI presentation on a "Draft Concept Proposal for Drills on Response to a Beyond-Design-Basis Event," which is shown in Enclosure 2.

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[1] The meeting notice is available via the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML12257A043.
[2] The NTTF report is available under ADAMS Accession No. ML111861807.
[3] The NRC slides are available under ADAMS Accession No. ML12277A201.

The purpose of the presentation was to understand industry views on whether NTTF 9.3, Tier 2 requirement to conduct periodic training and exercises for multi-unit and prolonged station blackout scenarios could be satisfied under NTTF 4.2. Most of the discussion centered around the extent of the drills. Specifically, how the licensees would demonstrate the capability to implement the strategies rather than having a discussion on how to implement the strategies. In addition, a discussion was held regarding whether the physical demonstration of procuring equipment and transporting it to the applicable connection point (without connecting) could be demonstrated out-of-sequence. It was clear that these issues needed further discussion and accordingly, the November 1, 2012, meeting will be needed. The staff noted during the meeting that there are time constraints as to how long the staff can continue to engage in discussions since an Order for the NTTF Tier 2 requirements would be needed by March 2013.

The next public meeting on this subject is scheduled for November 1, 2012.[4]

Enclosures:
As stated

[4] The meeting notice is available via ADAMS under Accession No. ML12257A046.

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Enclosures:
As stated

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DATE	10/22/2012	10/19/2012	10/22/2012	10/23/2012	10/23/2012

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[4] The meeting notice is available via ADAMS under Accession No. ML12257A046.

LIST OF PARTICIPANTS (PLEASE PRINT CLEARLY)

DATE: October 16, 2012

MEETING: PROPOSED IMPLEMENTATION OF TIER 2 EMERGENCY PLANNING ACTIONS RELATED TO THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT ACCIDENT

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DRAFT Concept Proposal for
Drills on Response to a Beyond-Design-Basis External Event

Drill Purpose:

- Demonstrate capabilities for responding to a Beyond-Design-Basis External Event (BDBEE) that comply with NRC Order EA-12-049 and related guidance.
- Establish a process that addresses NTTF Report Recommendation 9.3; specifically, "Conduct periodic training and exercises for multiunit and prolonged SBO scenarios. Practice (simulate) the identification and acquisition of offsite resources, to the extent possible."

Approach:

- Conduct a periodic BDBEE response drill.
- The drill will not be part of an evaluated exercise conducted to meet the requirements of 10 CFR 50, Appendix E.
- Participation by Offsite Response Organizations (OROs)[1] is not required; however, should they elect to participate, their performance will not be evaluated.
- Some drill activities may be performed out-of-sequence (e.g., activities in the field).
- A drill report will be developed and maintained for subsequent inspection.

Typical participating facilities:

- Simulated Control Room(s) for all on-site units. Control Room(s) may be simulated in any location (e.g., simulator, conference room or classroom, TSC, etc.) as determined by the licensee.
- Emergency Operations Facility (EOF)
- ERO alternate facilities (as defined in the site emergency plan) if included as part of a site's overall BDBEE response strategy
- Regional Response Center (RRC); participation limited to drill communications

Recommended Drill Framework:

Day 1

Drill initiated with a BDBEE resulting in an extended loss of AC power (ELAP) and a loss of normal access to the ultimate heat sink (LUHS) occurring simultaneously at all units on the site. The initiating event should occur during a period of minimum on-shift staffing, i.e., during a backshift, weekend or holiday.[2] [3]

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[1] OROs are those State and local agencies that have responsibility for responding to an emergency at a nuclear power plant as described in the site emergency plan.

[2] To allow for conduct during a normal work day, the drill scenario may use an assumed day and/or times (e.g., a drill conducted during normal work hours on a Tuesday may assume that the scenario takes place on a Saturday).

[3] Due to the assumed event start time and the time necessary for response personnel to access the site (per NEI 12-01), it is unlikely that the onsite TSC and OSC will be activated during the drill.

Enclosure 2

DRAFT Concept Proposal for
Drills on Response to a Beyond-Design-Basis External Event

Operators process through procedures – AOPs, EOPs and FSGs. Controllers will record times of FLEX-related decisions and actions.

Licensee may conduct out-of-sequence activities to demonstrate in-field/in-plant actions to deploy FLEX equipment.

Appropriate aspects of the site emergency plan implemented and/or simulated. Controllers will observe and critique performance in this area in accordance with the requirements of site's drill and exercise program.

Consistent with the site emergency plan and FLEX response strategies, the EOF and alternate facilities will be activated (not simulated).

Appropriate personnel at ERO facilities should coordinate the actions necessary for the acquisition and delivery of resources from the supporting RRC; however, activation the RRC is not required and actual delivery of equipment will not occur[4].

Drill termination may occur after all of the following have occurred:

- Appropriate strategies for maintaining or restoring a key safety function have been selected (as appropriate to the drill scenario), and the associated implementation actions have been taken or directed.
- Completion of any scheduled in-field/in-plant actions to deploy Phase 2 FLEX equipment. Actual installation or connection of equipment will be simulated.
- Arrangements for delivery of Phase 3 FLEX equipment have been coordinated with the RRC. The list of equipment requested during the drill does not need to be all inclusive for the assumed scenario event; however, the process must be demonstrated.
- Command and control of the event response has been transferred from the Control Room to either the EOF or the appropriate alternate facility (consistent with the site emergency plan and/or overall BDBEE response strategy). Sufficient play time should be allowed for decision-makers at offsite locations to demonstrate their ability to effectively manage the event (e.g., perform damage assessments for each unit, capability to communicate the status of each unit to OROs, determine priorities, etc.)

As envisioned, the drill should require approximately 5 to 6 hours.

Day 2+

Licensee will conduct out-of-sequence activities to demonstrate in-field/in-plant actions to deploy Phase 2 FLEX equipment, if not already demonstrated on Day 1. Actual installation or connection of equipment will be simulated.

[4] A separate drill involving the actual delivery of equipment from a RRC to a site will be conducted once/year (*subject to confirmation*).

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Following the drill, the licensee will issue a drill report in accordance with their existing drill and exercise program requirements. The report will include a timeline of the actions taken to implement FLEX-related strategies (i.e., a timeline that includes events recorded in Control Room followed by the subsequent implementation activities conducted in the field/plant).

Drill Scenario and Implementation Considerations:

Operational and radiological data:

May be supplied on paper or may use a simulator, or a combination of both. For multiple-unit sites with similar technologies, one simulator may be used with the resulting data taken as representative of all units. For multiple-unit sites with different technologies, all simulators may be used.

A significant radiological release attributable to the failure of a key safety function should not be included in the scenario since the purpose of FLEX strategies, and their successful implementation, is to prevent fuel damage or loss of containment integrity. Given this, the licensee of a multi-unit site should make provisions to demonstrate multi-unit dose assessment capability as an out-of-sequence demonstration. If performed during the drill, the results of the dose assessment should not be interjected into play.

Where reasonable, drill players should use the communications systems and equipment that would be employed during an actual response to a BDBEE. This equipment may be simulated if changes or modifications would be required to support drill use (e.g., the simulated Control Room could not use a system without the installation of a new antenna and cabling). The decision to use or simulate this equipment should also include resource and equipment safety considerations.

There is no requirement to assume a failure of a piece of FLEX equipment.

The arrival times of personnel reporting to the site from offsite locations should be consistent with NEI 12-01, assumption 2.2.4.

The arrival times of ERO personnel to the EOF and alternate facilities should reflect the postulated scenario conditions and be staggered. Selected arrival times should also consider a facility's distance from the plant site (e.g., the further away, the more a normally expected arrival time could be used) but in no case be greater than twice the normally expected arrival time.

Use of radiation protection equipment and supplies by personnel responsible for deploying FLEX equipment in the field/plant may not be simulated.

If the OROs are not participating, then a control cell should be established to simulate the appropriate warning/contact points (i.e., locations that take emergency notifications from the licensee).

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The scenario may assume that requested response assistance provided by OROs and other offsite resource providers (e.g., corporate support) is available within reasonably expected timeframes.

Actual delivery of FLEX equipment from an offsite resource center will be simulated unless coordinated with, and agreed to in advance, by the RRC.

As with other drills, a licensee should consider whether performance will count towards the DEP and ERO performance indicators (consistent with NEI 99-02).

Concept Development Actions:

Develop a set of EP-specific drill objectives and associated performance attributes, and obtain staff endorsement of the material (similar to what was done for HAB Exercises in NEI 06-04 R2).

The specific requirements associated with demonstration of the deployment of FLEX equipment will be developed by Extended Loss of AC Power Task Force.

Consider work hour limitations and overall organizational/resource impacts when developing drill requirements and implementation techniques (e.g., time compression, crediting some objectives with performance in other drills, etc.). Also, determine a drill implementation strategy for sites that will rely on Security staff to support deployment of FLEX equipment.

Determine a method to notify the NRC of the drill date(s). The method must support recurring demonstration.

Given the commonalities between FLEX strategies and those developed in accordance with 10 CFR 50.54(hh)(2), determine the regulatory acceptability of crediting a BDBEE drill as meeting a periodic exercise requirement specified in 10 CFR 50, Appendix E, Section F.2.j.

> " . . . implementation of strategies, procedures, and guidance developed under § 50.54(hh)(2) . . ."

Determine a method for all sites to credit the industry's periodic drill involving the actual delivery of equipment from a RRC to a site.

NRC staff should consider aspects of this drill when developing:

- New rule and guidance to address NTTF Report Recommendation 8
- NUREG-0654, Rev. 2