

April 18, 2012

MEMORANDUM TO: Robert J. Pascarelli, Chief  
Projects Management Branch  
Japan Lessons-Learned Project Directorate  
Office of Nuclear Reactor Regulation

FROM: Steven D. Bloom, Senior Project Manager /RA/  
Projects Management Branch  
Japan Lessons-Learned Project Directorate  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MARCH 28, 2012, PUBLIC MEETING ON THE  
DEVELOPMENT OF THE INTERIM STAFF GUIDANCE  
RELATED TO ORDER EA-12-049, MITIGATION STRATEGIES  
FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS RELATED  
TO THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT  
ACCIDENT

On March 28, 2012, the U.S. Nuclear Regulatory Commission (NRC) held a public meeting with the Nuclear Energy Institute (NEI), industry representatives, and members of the public to discuss the development of the Interim Staff Guidance (ISG) for compliance with Order EA-12-049, Mitigation Strategies for Beyond-Design-Basis External Events (BDBEEs).

The NRC staff provided a short introduction on the schedule and anticipated contents of an ISG. The NRC staff stated that in order to complete issuance of the final ISG by the end of August 2012, they anticipate the need to publish the draft ISG for comment in the *Federal Register* by the end of May 2012. The NRC staff stated that they anticipate having another public meeting in early May and another in June. The staff slides can be obtained from the Agencywide Documents Access and Management System (ADAMS) Accession No. ML12089A006.

The NRC staff discussed the industry proposed guidance that could be endorsed by the ISG and stated that they expect it to contain information related to the contents of the integrated plan required by the Order, Section VI.C.1.a, including a template. They expected that it would discuss the various mitigating strategies, as well as other portions which will be discussed in more detail during the industry presentation. The NRC staff expects that the plans will include a schedule for when the various parts of the plan will be implemented. In addition, the NRC staff discussed the use of portable generators as an alternate alternating current (ac) source. NEI stated that they would be treated as *Integrated, Diverse & Flexible Mitigation Capability* (FLEX) equipment.

The NRC staff asked NEI for a date as to when they would be submitting the industry guidance. NEI stated that they planned on submitting it by the end of April, however, the template would not be part of that submittal but would be part of a later revision.

The NRC staff provided a presentation on the treatment of backup power to the hydrogen igniters for Mark III and ice condenser containments under Order EA-12-049 (ADAMS Accession No. ML12089A008). The NRC staff stated that the strategies do not ensure that hydrogen generation will not occur. They stated that the hydrogen igniters are usually included in the emergency operating procedures to ensure that they are energized before any hydrogen is generated and before fuel is damaged. The hydrogen igniters currently have a backup power supply as a result of a voluntary industry initiative, however, this might will not survive a BDBEE because the protection of the equipment is not specified, so inclusion of these power supplies in the strategies to maintain or restore containment capabilities, as required by the Order, is necessary. The NRC staff and NEI discussed the timing of starting the igniters prior to the generation of hydrogen.

NEI and industry representatives started with the present status of their guidance document (ADAMS Accession No. ML12089A009). They stated that they are on Revision A3 and are still in the process of obtaining comments from the task force members, as well as the various licensees. They stated that the template for the integrated plan will be part of the guidance document; however, it would not be part of the document submitted at the end of April. Next, NEI raised several issues related to the Order to ensure that there was a common understanding.

The first such issue was related to the availability of the equipment in all modes. Industry stated that the strategies are designed for at power conditions, but that the FLEX equipment would be available for deployment in any condition.

The next issue was related to the meaning of "loss of normal access to the ultimate heat sink [UHS]." The industry stated that their understanding is that there would be water in the UHS and that the piping connected to the UHS would still be available following a BDBEE of a magnitude for which certain of the strategies would be practicable. They stated that there are some sites that have condensate storage tanks that do not need motive force to draw the water, but need the UHS piping to move the water.

Next, NEI confirmed that when the Order talks about "...add multiple ways to maintain or restore core cooling, containment and SFP cooling capabilities..." that their guidance will include a need for primary and alternate connection points for the portable equipment. NEI stated that on-site FLEX equipment will only get licensees to a stable condition, but that licensees would need additional equipment to get to cold shutdown in the event of a BDBEE. The industry explained the contents of their guidance document including the development of FLEX support guidelines to implement the mitigating strategies.

NEI stated their guidance will include a definition for reasonable protection standards including the housing requirements, and the equipment pedigree. NEI indicated that they believe the equipment will not be subject to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," (the maintenance rule).

NEI stated that there is a request for proposals out for the operation of regional support centers. The centers will be able to deliver the necessary equipment to support the final phase. The licensees will have common mechanical and electrical connectors for attachment of the FLEX equipment stored in the regional support centers.

Industry gave a presentation on their definition of impeded site access which is contained in their draft guidance (ADAMS Accession No. ML12089A014) as it relates to the March 12, 2012, request for information regarding staffing analyses. NEI is seeking NRC endorsement of said guidance. NEI has proposed a definition of impeded site access that would include stages of impediments that include that *no site access* would be available for the first 0 to 4 hours following a BDBEE, and a stage from 4 to 24 hours following a BDBEE with *limited site access*. NEI stated that they have developed these stages based on real event responses to natural disasters. The NRC discussed the fact that they have data points for event responses to natural disasters which counter the time frames industry proposes for the impediment stages. The NRC also stated that they believe that the stages should be made site specific.

Enclosure:  
List of Attendees

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**ADAMS Accession No.:** ML12104A019

<b>OFFICE</b>	PM: NRR/JLD/PMB	LA: NRR/DORL	BC: NRR/JLD/PMB	PM: NRR/JLD/PMB
<b>NAME</b>	SBloom	SRohrer	JPascarelli	SBloom
<b>DATE</b>	04/18/2012	04/18/2012	04/18/2012	04/18/2012

**OFFICIAL RECORD COPY**

LIST OF ATTENDEES

U.S. NUCLEAR REGULATORY COMMISSION

MARCH 28, 2011, PUBLIC MEETING ON

DEVELOPMENT OF GUIDANCE FOR IMPLEMENTATION OF

ORDER EA-12-049, MITIGATING STRATEGIES

RELATED TO THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT ACCIDENT

Name	Organization
Steven Bloom	U.S. Nuclear Regulatory Commission (NRC)
Robert Pascarelli	NRC
Eric Bowman	NRC
Eileen McKenna	NRC
Don Helton	NRC
Anthony Mediola	NRC
Jack Davis	NRC
Jessica Kratchman	NRC
Jason Dreisbach	NRC
Earl Libby	NRC
N. R. Karipineni	NRC
Dave Brown	NRC
Jim Andersen	NRC
Kevin Williams	NRC
Bill Ruland	NRC
Terry Jackson	NRC
Steve Jones	NRC
Tim Reed	NRC
Greg Casto	NRC
Lisa Regner	NRC
Blake Purnell	NRC
Antonio Dias	NRC
Dave Skeen	NRC
Sue Perkins Grew	NEI
Dave Bambrell	Southern Nuclear
Cyril Roden	UniStar
Gregory Zucal	ERIN
Bob Reible	Luminant Comanche Peak 3 & 4
Bryan Ford	Entergy
Scott Bauer	NEI
Masrur Khan	Bechtel

Enclosure

Mike Meldon	WEC
Doug True	ERIN
Dave Young	NEI
Bill Freebairn	Platts/Nucleonics Week
D. Bryan Miller	Progress Energy
Daniel Redden (by phone)	Exelon Nuclear
Steve Root (by phone)	San Onofre
Nancy Chapman (by phone)	Bechtel
Jim Smit (by phone)	Nexus Engineering
Denny Buschbaum (by phone)	STARS
John McFadden (by phone)	Westinghouse Electric Company
Ken Petersen (by phone)	STARS
John Stephenson (by phone)	Progress Energy
Ben Heshmatpour (by phone)	DHS
Dennis Jones (by phone)	TVA
Joel Woodcock	Westinghouse Electric Company