

September 28, 2011

MEMORANDUM TO: Martin J. Virgilio, Deputy Executive Director
for Reactor and Preparedness Programs
Office of the Executive Director for Operations

FROM: David L. Skeen, Deputy Director **/RA/**
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF SEPTEMBER 21, 2011 PUBLIC MEETING TO
DISCUSS POST-FUKUSHIMA NUCLEAR INDUSTRY ACTIONS

On September 21, 2011, a Category 2 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and members of the nuclear industry, represented by the Nuclear Energy Institute (NEI). The meeting was held at the NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of this meeting was for members of the nuclear industry to discuss their plans and proposed actions to address the lessons-learned from the Fukushima Dai-ichi nuclear accident. Two handouts were provided and are available in the Agencywide Documents Access Management System (ADAMS), Accession Nos. ML11271A117 and ML11271A111. Additionally, a transcript was made of the meeting and is available at ADAMS Accession No. ML11271A105.

The industry focused on two documents. One is a Charter establishing an industry steering committee. The industry's Fukushima Response Steering Committee is intended to coordinate the industry's overall response to the accident at Japan's Fukushima Dai-ichi nuclear plant. The Charter also indicates that the committee intends to provide oversight to review the implementation of any proposed industry action plans. The NRC questioned whether the industry would be required to perform any industry identified actions. It was indicated that any items agreed upon regarding safety posture, in the context of nuclear plant operations, will be led by the Institute of Nuclear Power Operations (INPO). Any issues that are typically not directly related to safety posture, would be the purview of NEI.

The second document outlines the industry's framework for going forward, called The Way Forward document, which captures the proposed industry short-term actions, analyses and areas that may require further either information or analysis. The industry indicated that The Way Forward document was intended to be a living document focused on safety and operational excellence.

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A third document was mentioned to be under development, and is intended to be a specific execution document known as the Strategic Response Plan. The NRC staff indicated that this activity was being conducted in parallel with the NRC activities. The NRC questioned whether given this proposed plan, the industry had determined their resource needs, timelines, and a prioritization of actions. It was indicated that the industry was in the very early stages and once determined, those activities would be coordinated with the NRC.

Concerns with the availability of certain skillsets, similar to the resource issues identified with implementation of Section 50.48 to Title to the *Code of Federal Regulations* (10 CFR) were discussed. The NRC asked whether any highly specialized resources had been identified. No areas had been identified, but a comprehensive review has not been completed.

The NRC questioned how the industry intended to incorporate the lessons-learned to new reactor design and licensing. NEI indicated that no large organization would be put in place to incorporate lessons-learned, as there will be time. It was expected that any lessons-learned for new reactors will be incorporated during the construction phase.

The industry went over the building blocks, as outlined in The Way Forward document. The seven building blocks were addressed under four topical areas:

- Renewing the focus on the current plant operations;
- Near and long term lessons-learned associated with emergency planning;
- Improve the effectiveness of our emergency response capability; and
- International coordination.

RENEWING FOCUS

The status of various operational INPO event reports aimed at focusing on improving the safe operation of nuclear power plant was discussed. Several pre and post Fukushima initiatives were discussed. It was mentioned that INPO was conducting review visits to observe implementation of the actions identified in a 2010 significant operating event report and 2011 event report concerning the individual contributor's roles in operational and nuclear safety and crew and operational performance inside the control room.

LESSONS-LEARNED

The discussion centered on two areas, (1) a timeline of the Fukushima event, and (2) INPO Event Reports (IERs) issued regarding the Fukushima event. The industry indicated that they have completed an initial draft of an operational timeline and intend to discuss the outstanding questions with Tokyo Electric Power Company (TEPCO). It is intended that this initial timeline will be complete at the end of the November. However, NEI noted that the timeline is a living document and will need to be revised as more information becomes available. The NRC indicated that a similar effort was being led by the U.S. Department of Energy and efforts should be made to interact at some point to ensure a common understanding of events. Another industry team will be working to understand the programmatic, organizational, and cultural issues. This effort is expected to be complete around the end of 2011/early 2012.

The industry described the three IERs issued during the Fukushima event related to walkdowns to assess the readiness to respond to both the design and beyond-design basis events, spent fuel pool cooling (SFP), the long-term loss of alternating current (ac). The walkdowns were completed mid-April. Some deficiencies were identified with 60 percent corrected at this point, with 95 percent expected to be corrected by the end of the year. The remaining 5 percent required outages to complete and are expected to be completed at the next opportunity. The industry indicated that, despite the deficiencies identified, no problems existed which would prevent the performance of the emergency response guidelines.

The NRC questioned whether the additional information received regarding the status of the Fukushima SFPs, had any impact on the proposed recommendations provided in the associated IER. The industry indicated that it had not. Recommendations regarding adding procedural cautions to ensure an understanding of the critical measures for the SFP are underway and are expected to be completed by the end of September.

The IER recommendations regarding mitigating the effects of a long-term loss of ac were discussed. The industry has recommended that domestic facilities address how they would cope with a 24-hour coping period for the loss of ac. The response is due December 28th. The NRC questioned the reason for the selection of a 24-hour coping period given that the NRC's Near Term Task Force (NTTF) has proposed to the Commission a longer coping duration. The industry indicated that in the near-term, they were focusing on what it would take to get to a 24-hour coping duration. No plant alterations or modifications are being requested. The NRC indicated that the NRC is still looking to develop a common understanding regarding the underlying assumptions and analysis leading to determining what should be the right coping timeframe. NEI indicated that they expect that there may need to be some variability in the final required coping time as one-size may not fit all. The industry intends to have a series of discussions regarding best practices in 2012.

EMERGENCY RESPONSE EFFECTIVENESS

In the area of emergency response effectiveness, the industry mentioned that an emergency response plan was developed pre-Fukushima as a result of the 2010 Gulf Oil spill. Their intent is to revise that plan to reflect any lessons-learned and then reissue it. Additionally, the industry is reviewing the external response related to both equipment and technical support. An initial survey has been issued to look at the equipment that would be available onsite, in the region or nationally; the protocol for storing it; and to look at the logistics to move necessary equipment to a site during a nuclear emergency.

INTERNATIONAL COORDINATION

It was indicated that the industry was monitoring international reactions to the Fukushima event through the World Association of Nuclear Operators. Also, the industry is planning an international coordination meeting in Atlanta, Georgia, to discuss ongoing activities with a follow-up meeting planned next year.

The NRC indicated that an international initiative was underway by the Nuclear Energy Agency in late October/November to develop acceptance criteria in support of the various international "stress-tests."

INDUSTRY FEEDBACK OF NTTF RECOMMENDATIONS

The industry provided feedback regarding prioritization of the NTTF recommendations. It was indicated that the industry had formed a working group to address regulatory proposals and found good alignment between the NTTF recommendations and prioritization, and the areas the industry was reviewing. Although areas for improvement were identified, the industry indicated that given their low probability, high consequence approach, very few things about the Fukushima event caught the industry by surprise. In improving defense-in-depth against those very low probability, very high consequence events, industry put forward the notion of diversity, redundancy and flexibility will best serve them in their response characteristics capabilities. This approach would not necessarily lend itself to the need for prescriptive regulation. This concern was made for each of the six recommendations proposed for nearer-term implementation.

As the industry proposed that they had some differences with the specifics in the recommendation, the major concern was reiterated from previous public discussions regarding the need for Orders for certain issues. The NRC questioned the industry regarding what would be the appropriate tool if not an Order. One response was the use of a confirmatory action letter. The NRC indicated that a final decision regarding the appropriate regulatory tool would be made after discussions with stakeholders were complete.

The NRC questioned whether there were any areas that were missed by the NTTF report that should be considered. As mentioned previously by the NRC staff, the industry indicated a possibility to look at the loss of service water/ultimate heat sink.

PUBLIC COMMENTS

The comments noted below are related to the recommendations that were to be discussed at this meeting. A member of the press questioned the transparency of the implementation of the proposed industry actions, as the INPO and other industry organizations' reports are not typically public. The NRC staff indicated that various other public forums where the progress of these activities are discussed will be conducted to ensure the appropriate level of openness. A non-governmental organization representative questioned the need for orders, as it was felt that the public would not be afforded due process. The NRC indicated that stakeholder meetings would be conducted on each of the individual actions as the NRC moves forward.

Other comments were provided by other stakeholders present at the meeting or by phone. These comments may be found in the meeting transcript at [ADAMS Accession No. ML11271A105].

The NRC indicated that for members of the public who had concerns outside of lessons-learned from Fukushima, that other feedback mechanisms exist, including filing of petitions under 10 CFR 2.206 and 2.802.

Members of the public were in attendance; however, no Public Meeting Feedback forms were received. No commitments or regulatory decisions were made by the NRC staff during the meeting. Please direct any inquiries to Ms. Eva Brown at 301-415-3152, or eva.brown@nrc.gov.

Enclosures:

1. Industry Charter
2. Nuclear Energy Institute – Way Forward Document

cc: ListServ

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