



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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October 3, 2014

MEMORANDUM TO: Donald Chung, Chief
PRA Operations and Human Factors Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

FROM: Antonios Zoulis, Reliability and Risk Analyst */RA/*
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SUBJECT: SUMMARY OF THE SEPTEMBER 8, 2014, PUBLIC MEETING
ON THE NUCLEAR ENERGY INSTITUTE DRAFT GUIDANCE
FOR PRIORITIZATION AND SCHEDULING IMPLEMENTATION

The U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting on September 8, 2014, to discuss the Nuclear Energy Institute's (NEI) draft guidance for prioritization and scheduling implementation. This guidance had been transmitted to the NRC via letter in April 15, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14105A481). The meeting was held at the NRC headquarters location in Rockville, Maryland. The purpose of this meeting was to address several items related to the Risk Prioritization Initiative (RPI). This initiative is in response to the Staff Requirements Memorandum (SRM) on COMGEA-12-0001/COMWDM-12-0002, "Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency," dated February 6, 2013 (ADAMS Accession No. ML13037A541). More specifically, NEI demonstrated their draft guidance using hypothetical examples in the areas of Security, Emergency Preparedness (EP), and Radiation Protection (RP).

The meeting notice and agenda is available in ADAMS under Accession No. ML14230A126. The meeting slides and handouts are available in ADAMS under Accession Nos. ML14276A113 (NRC presentation) and ML14276A112 (NEI presentation). Information about RPI can also be found on Regulations.gov Docket ID NRC-2013-0064. Enclosed is a list of the meeting participants.

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In addition to the material presented in the slides, the major areas of discussion are summarized as follows:

General Remarks:

- The staff indicated that the main goal of the NRC is to ensure that safety continues to be a primary focus of this initiative. The efforts of the demonstration pilots and the tabletop exercises will be used to inform the Commission paper scheduled for March 2015.
- The industry stated that the goal of the RPI process is to prioritize and schedule plant activities (both regulatory and plant-driven) in a safety focused manner; under a framework that is predictable, stable, and straightforward.
- The industry indicated that the NEI guidance will be updated based on lessons learned and comments received during the demonstration pilots and the tabletop exercises. The NRC staff expressed concern that the sections and flowcharts related to EP, Security, and RP may need to be further discussed and refined based on participant input. In addition, how safety, security, EP, and RP are weighted to determine the overall priority of an issue in the aggregation section requires further clarification.
- The NRC staff expressed significant concern on the inclusion of compliance issues in RPI, in terms of the expansion in scope and the implications on the NRC's regulatory oversight framework in pursuing this path.
- The NRC staff indicated that the overall framework still contains a primarily qualitative orientation in the NEI guidance. As indicated on COMGEA-12-0001/COMWDM-12-0002, the original intent of this initiative was to enhance safety by applying probabilistic risk assessment (PRA) to determine the risk significance of current and emerging reactor issues in an integrated manner and on a plant-specific basis; and, in order to gain risk insights to propose for NRC approval of prioritization in the schedule for implementation of regulatory actions. However, it has been a challenge to appropriately characterize non-quantitative areas such as Security, EP, and RP in the proposed NEI guidance. For example, it was challenging to determine what constituted "more than minimal impact" for Security, EP, and RP issues using qualitative information.
- NEI presented 16 hypothetical examples to demonstrate the NEI draft guidance for prioritization. The issues presented demonstrated the ability of the process to prioritize over the entire spectrum of possible outcomes.

Security

- Subject matter experts (SMEs) from industry and the NRC were present to discuss and exercise the Security flowchart presented in the NEI draft guidance. The comments from Security were as follows:
 - The construct for security is based on the construct developed for safety, which utilizes a PRA approach. However, the risk associated with security is a conditional risk (e.g., the probability of an attack is equal to one), as the likelihood of an initiating event is unknown and not random. Consideration should be given to use a different approach for assessing risk for security measures.

- When conditional risk is assessed at a facility for security, the typical PRA approach is not used. In general, path analysis is applied, which looks at several layers: detection, assessment, response, and interdiction. The timelines help to establish security margins. Early detection and delay features tend to improve the conditional risk.
- When measures are considered to establish a ranking of priorities, safety measures can be prioritized at a level 1. However, security measures can be scored no higher than a level 2. It is not clear that the restriction is appropriate.

Emergency Preparedness

- Subject matter experts (SMEs) from industry and the NRC were present to discuss and exercise the EP flowchart presented in the NEI draft guidance. The comments from EP were as follows:
 - The examples were broad in nature and were developed to exercise the process for screening and prioritizing the proposed activities. It was not clear if the issues used during the tabletop would be appropriate for this proposed process. For example, issues dealing with compliance raise a concern with maintaining regulatory stability.

Radiation Protection

- Subject matter experts (SMEs) from industry and the NRC were present to discuss and exercise the RP flowchart presented in the NEI draft guidance. The comments from RP were as follows:
 - The overall mechanics of the prioritization process was straight forward and easily understood. However, processing the RP examples through each of the areas' (safety Security, EP, RP, and Reliability) flow chart was somewhat problematic in that the answers to the decision gates appeared to be too subjective and heavily reliant on the (not well defined) scenario assumptions. This was particularly true when answering the Safety Importance Step 2 questions related to "more than minimal." In several of the non-PRA examples, the issue did not clear a decision gate (e.g., "yes" outcome) because it was assumed that the licensee was already in compliance, or had effectively addressed the issue with compensatory measures, thereby lowering the impact and importance of implementing the proposed action.
 - To achieve a high importance rating in RP flow chart issues have to pass one of two gates that ask the question "Plant Specific Cost-Benefit Achieved?" It is not clear if this cost-benefit refers to an ALARA (dose reduction) assessment. Since the analysis for determining the cost-benefit was not included in the examples, the results seemed somewhat arbitrary and counterintuitive. For example, in exercise RP #2a the proposal to remove and replace leaky fuel (an expensive action) was deemed cost-beneficial due to the reduction in dose to the public, which is typically very low; while in RP #3 the upgrade to effluent release software (a much lower cost action to comply with a revised 10 CFR 50 appendix I) does not pass the cost-benefit test. The outcomes can be subjective depending on how the action or issue is characterized in the process.

Next Steps:

- The NRC staff will continue to engage with NEI in public meetings to ensure the draft guidance addresses the comments presented in this summary and in previous correspondence submitted via email on June 5, 2014 (ADAMS Accession Nos. ML14157A112 and ML14157A113 respectively).
- In addition, the Staff will continue to participate in the demonstration pilots of the draft guidance to gather insights to help develop the March 2015 notation vote paper for Commission consideration.
- NEI indicated that additional lessons-learned and feedback from demonstration pilots will be incorporated in final guidance that is anticipated for Fall 2014.

Enclosure:
Attendance List.

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DATE	10/ 03 /14	10/ 03 /14

OFFICIAL RECORD

ATTENDANCE LIST

September 8, 2014 (Monday)

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Aby Mohseni	NRC
Antonios Zoulis	NRC
Tim Reed	NRC
Jerrold Demers	NRC
Randy Sullivan	NRC
Joseph Rivers	NRC
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Roger Pedersen	NRC
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John Butler	Nuclear Energy Institute
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Jerry W. Hiatt	NEI
Ellen Anderson	NEI
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Raymond Landis	NEI
Don Dube	Erin Engineering
Jana Bergman	Scientech/Curtis-Wright
Amir Afzali	Southern Nuclear
Raymond Gallucci*	NRC
Mark Richter*	NEI
William Freebairn*	Platts
Gerald A Loignon, Jr*	SCE&G
Phil Lashley*	First Energy

* Participate via video-conference or teleconference

Enclosure