

MEMORANDUM TO: Joseph L. Birmingham, Project Manager
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SUBJECT: SUMMARY OF SEPTEMBER 21, 1999, MEETING BETWEEN THE
NUCLEAR REGULATORY COMMISSION (NRC) AND THE NUCLEAR
ENERGY INSTITUTE (NEI) REGARDING CHANGES TO GUIDANCE
DOCUMENTS USED TO IMPLEMENT 10 CFR 50.65(a)(4)

On September 21, 1999, the NRC staff held a public meeting in One White Flint North with representatives from the Nuclear Energy Institute (NEI) to provide feedback on NEI's proposed changes to the final draft NUMARC 93-01, Section 11, "Assessment of Risk Resulting from Performance of Maintenance Activities" (attachment 1). This was the third public meeting held to discuss the proposed industry guidance developed to implement 10 CFR 50.65(a)(4). Two previous meetings were held on June 19 and July 9, 1999 to discuss the same topic.

During the meeting, the NRC staff focused on several issues that need to be clarified before the staff would pursue endorsement of the final draft Section 11 to NUMARC 93-01. The public meeting agenda topics of discussion included:

- ! Low Safety-Significant Systems/Trains in Scope of (a)(4) Assessments
- ! Assess and Manage Maintenance Configurations
- S Screening Methods
- S When Different Screening Methods are Used
- S Limitations in Screening Methods
- S Credit for Management Actions/Compensatory Measures
- S Risk Thresholds

I Definition of Unavailability

A copy of the public meeting agenda is provided in attachment 2 to this memorandum. The NRC staff provided NEI with their position on the scope of SSCs that may be included in the industry pre-maintenance safety assessment programs. As described in Draft Guide (DG) 1082, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants," the NRC stated that the scope should include those SSCs modeled in probabilistic risk assessments (PRAs) plus all other SSCs considered to be risk significant (high safety significant (HSS)) by the licensees' maintenance rule expert panels. In addition, licensees should include low safety significant (LSS) SSCs that meet the following conditions for inclusion in pre-maintenance safety assessment programs:

- (1) the SSC is a support system for a HSS SSC,
- (2) the SSC has dependencies with another low safety significant SSC
- (3) the SSC failure could increase any initiating event frequency, or
- (4) the SSC is in a relatively low frequency cutset that becomes a significant contributor to the plant core damage frequency (or large early release frequency) when multiple SSCs are out of service.

NEI's final draft version of NUMARC 93-01, Section 11.3.3, Scope of the Assessments for Power Operating Conditions, does not clearly define the 4 types of SSCs listed above for SSC systems and trains within the scope of the Paragraph (a)(4) assessments. The NEI stated that they will evaluate whether all the criteria noted above should be added to their guidance document.

The NRC also discussed methods licensees should use to assess and manage increases in risk due to planned maintenance activities. The final draft NUMARC 93-01, Section 11, uses methods that mimic the NRC's significance determination process (SDP) as an initial screening tool for evaluating the risk significance of relatively simple maintenance configurations. The NRC staff stated that the SDP process was established for NRC inspectors to evaluate the risk significance of events and inspection findings. It is not appropriate for use in assessing the risk significance of planned maintenance activities. Due to the complexity of maintenance configurations (i.e., more than 2 risk significant systems or trains out of service (OOS) for maintenance), the NRC also stated that the initial screening tools in Section 11 lack sufficient detail to adequately assess risk. In Section 11, the *Likelihood Rating Matrix* table would have to be revised with site specific PRA insights of a particular plant type (e.g., Combustion Engineering PWR plant and/or General Electric BWR plant). The matrix could also be similar to a plant specific two dimensional risk-informed matrix for it to be useful as a risk-informed assessment screening tool of pre-planned maintenance configurations. The risk screening assessment tool should also be based on the configuration specific core damage probability (CDP) and not an average annual risk assessment of core damage frequency (CDF) which is the metric used in the SDP.

During the maintenance rule baseline inspections, the NRC determined that for more complex configurations, most licensees use their site specific PRA insights in a risk-informed safety assessment procedure or the licensees risk analyst re-quantified the actual risk using the site specific PRA models and/or a risk monitor (e.g., equipment out of service (EOOS) monitor). Based on this information, the final draft Section 11 guidance should clearly state when section

11 screening tools do not have sufficient detail and a more complex assessment tool should be completed using site specific PRA information.

The NRC also stated that the draft final Section 11 did not contain sufficient details on licensee management actions and compensatory measures. These could be used to allow licensees to take credit for management actions and other compensatory measures to reduce the risk significance of a particular configuration and keep the plant at a lower risk level.

DG 1082 proposes initial screening thresholds of delta CDP and delta LERP of $5E-7$ and $5E-8$ respectively for risk significant maintenance configurations. A copy of the SDP performance thresholds (i.e., delta CDF and delta large early release frequency (LERF)) is provided in attachment 3 to this memorandum. The NRC staff continues to assess whether the SDP thresholds should be consistent with screening thresholds used for other regulatory applications and industry initiatives (e.g., Regulatory Guide 1.174, EPRI PSA Applications Guide, EPRI Temporary Design Change). A table entitled "Use of Risk Information in the NRC and Industry Programs," also contains delta CDF and delta LERF thresholds and is provided in attachment 4 to this memorandum.

The NRC also discussed their views on an appropriate definition for unavailability. The NRC believes that one definition should be used consistent with NRC regulatory programs and industry initiatives for tracking system unavailability (e.g., NRC Performance Indicators in the Inspection and Oversight Process, Institute of Nuclear Power Operations (INPO) Equipment Performance and Information Exchange (EPIX) database definition). This will assure consistent and uniform application between different regulatory programs and industry initiatives and should reduce licensees' burden since one definition will result in less effort to track unavailability time. The INPO EPIX database definition for unavailability is provided in attachment 5 to this memorandum.

The attendance list for this meeting is provided in attachment 6.

Attachments: As stated

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ORIGINATOR: FXTalbot

SECRETARY: CTobe

DATE: April 26, 2002

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