

Docket file



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

January 12, 2000

MEMORANDUM TO: Cynthia Carpenter, Chief
Generic Issues, Environmental, Financial &
Rulemaking Branch
Division of Regulatory Improvement Programs, NRR

FROM: Joseph Birmingham, Project Manager *J Birmingham*
Generic Issues, Environmental, Financial &
Rulemaking Branch
Division of Regulatory Improvement Programs, NRR

SUBJECT: SUMMARY OF MEETING WITH THE NUCLEAR ENERGY INSTITUTE
(NEI) ON THE STATUS OF THE NEI RISK-INFORMED POST-FIRE
SAFE SHUTDOWN CIRCUIT ANALYSIS (FIRE-INDUCED CIRCUIT
FAILURES) METHODOLOGY DEVELOPMENT EFFORT

The Nuclear Regulatory Commission (NRC) held a public meeting with the Nuclear Energy Institute (NEI) in Rockville, Maryland on December 20, 1999, to discuss the status of NEI's risk-informed post-fire safe shutdown circuit analysis (fire-induced circuit failures) methodology development effort. Three members of the Boiling Water Reactor Owners Group (BWROG) Appendix R Committee attended the meeting to provide any further information needed on the methodology's relationship to the recently completed BWROG deterministic post-fire safe shutdown circuit analysis methodology. A list of attendees is attached (Attachment 1). An initial draft outline of the industry circuit analysis methodology had been provided to the staff in advance of the meeting (Attachment 2). The NEI representatives gave a slide presentation on the current status of the industry methodology (Attachment 3).

The NEI representatives stated that they have conducted the NEI risk-based methodology development effort under the assumption that it (and the complementary BWROG methodology) will be used by licensees to address known issues or past incomplete analyses to the extent they are identified in the future. Consequently, industry is seeking NRC endorsement of the industry methods as one acceptable approach to addressing fire-induced circuit failure issues. The staff stated that, rather than relying solely on NRC inspection results to indicate the need for post-fire safe shutdown circuit re-analysis, licensees need to follow valid criteria with which to pro-actively judge the adequacy of previous licensee circuit analysis assessments and analyses.

The staff stated that the NEI outline of its risk-based post-fire safe shutdown circuit analysis methodology appeared to constitute an acceptable conceptual approach to the issue. Based on the discussions during the meeting, the staff expects the revised methodology outline (discussed below) will be an acceptable approach.

At the conclusion of extensive discussions the following agreements were reached:

- NEI will develop a "graduated trigger device" (initiation criteria) proposal for licensee fire-induced circuit failure re-analysis, and this set of criteria will be incorporated in NEI's

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self-assessment methodology (which is the subject of a January 21, 2000 industry workshop). The NRC will informally review and comment on NEI's proposed circuit analysis self-assessment initiation criteria in advance of the industry workshop (i.e., the NRC will place the NEI criteria and related NRC comments on its reactor fire protection website before January 20, 2000).

- NEI agreed to revise its methodology outline (Attachment 2) based in whole or in part on the comments provided during the December 20, 1999 meeting, and include a near-term issue closure schedule. NEI will provide the NRC staff with a letter containing the revised methodology and schedule by January 17, 2000.
- Upon review of the NEI initiation criteria proposal, revised methodology outline, and near-term issue closure schedule, the NRC will determine whether, and in what manner, the Enforcement Guidance Memorandum (EGM) 98-002, Revision 1, Appendix R formal enforcement deferment could be extended.
- NEI will provide a complete draft of the NEI risk-based post-fire safe shutdown circuit analysis methodology by March, 2000. It is expected that this draft will be reviewed in parallel with NEI and EPRI conducted fire tests and NEI risk-based circuit analysis methodology pilot applications.
- The next meeting between NEI and the staff is planned for March or early April, 2000.

A detailed summary of the agreements reached at the meeting is included as Attachment 4.

Project No. 689

- Attachments:
1. List of Attendees
 2. Draft Outline of the NEI Methodology
 3. NEI Slide Presentation
 4. Summary of Agreements

cc w/att 1: See list

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cc w/att 1: See list

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LIST OF ATTENDEES, DECEMBER 20, 1999
NRC/NUCLEAR ENERGY INSTITUTE MEETING ON APPENDIX R CIRCUIT ANALYSIS

| <u>NAME</u> | <u>ORGANIZATION</u> |
|---------------|---|
| J. Hannon | Office of Nuclear Reactor Regulation (NRR)/Division of Systems Safety and Analysis (DSSA)/Plant Systems Branch (SPLB) |
| J. Birmingham | NRR/RGEB |
| P. Qualls | NRR/DSSA/SPLB |
| L. Whitney | NRR/DSSA/SPLB |
| S. West | NRR/DSSA/SPLB |
| S. Wong | NRR/DSSA/Probabilistic Safety Assessment Branch |
| R. Jenkins | NRR/Division of Engineering/Electrical and Instrumentation Controls Branch |
| D. Modeen | Nuclear Energy Institute |
| F. Emerson | Nuclear Energy Institute |
| T. Gorman | Boiling Water Reactors Owners Group (BWROG) |
| G. Warren | BWROG |
| S. Hardy | Carolina Power and Light |
| R. Hill | Southern Nuclear - Farley |
| V. Warren | PECO Energy |
| F. Wyant | Sandia National Laboratory |
| N. Siu | RES |
| M. Dey | RES |
| R. Jenkins | NRR/DE/EELB |
| J. Hyslop | NRR/DSSA/SPLB |
| M. Pohida | NRR/DSSA/SPLB |
| A. Wyche | SERCH Licensing/Bechtel |
| K. Green | NUSIS |