

January 26, 2007

ORGANIZATION: Nuclear Energy Institute

SUBJECT: SUMMARY OF THE LICENSE RENEWAL MEETING BETWEEN THE
U.S. NUCLEAR REGULATORY COMMISSION STAFF AND THE
NUCLEAR ENERGY INSTITUTE REGARDING GENERIC AGING
LESSONS LEARNED AGING MANAGEMENT PROGRAM XI.E6

The U.S. Nuclear Regulatory Commission (NRC) staff and the Nuclear Energy Institute (NEI) met on November 30, 2006, to discuss the NRC staff's review of NEI's submittal regarding the need for Generic Aging Lessons Learned (GALL) Aging Management Program (AMP) XI.E6, "Electrical Cable Connections Not Subject to Title 10 of the Code of Federal Regulation (10 CFR) 50.49 Environmental Qualification." NEI's position is contained in a white paper submitted by letter dated September 5, 2006 (ADAMS Accession No. ML062770100). Enclosure 1 provides a listing of the meeting participants and the meeting agenda is contained in Enclosure 2. The NRC staff's talking points are contained in Enclosure 3.

The NRC staff addressed each of the industry concerns as stated in the NEI white paper and two additional operating experiences that the staff identified. In search of operating experience, the staff has found that the majority of loose connections events was due to human errors or design deficiencies. Operating experience has not shown that failed connections due to aging are a significant cause of loss of safety related equipment and very few connection failures were related to aging. These operating experiences do not appear to support a periodic inspection as currently proposed in AMP XI.E6. The NRC staff will consider revising AMP XI.E6 to recommend a one time inspection on a sample basis to ensure that either aging of cable connections is not occurring or existing preventive maintenance programs are effective such that a periodic inspection is not required. NEI responded to the NRC staff proposal of a one time inspection for cable connections with comments regarding sample size and connections associated with control room equipment. Additionally, the industry wanted to take credit for periodic preventive maintenance programs involving cable connections. Based on discussions related to Enclosure 3, the NRC staff determined that if indications of any degradation are identified, corrective actions must be implemented, including sample size expansion and periodic inspection. The NRC staff indicated that it will issue an interim staff guidance to revise AMP XI.E6 to recommend a one time inspection for cable connections.

/RA/

Stephen T. Hoffman, Senior Project Manager
License Renewal Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Project No. 690

Enclosures:
As stated

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**List of Participants for the
Meeting Between the U.S. Nuclear Regulatory Commission Staff
and the Nuclear Energy Institute**

November 30, 2006

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Dominion
NMC
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PPL Susquehanna
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First Energy/Excel Services
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* By telephone

Agenda
NRC Staff Meeting with NEI to Discuss
Aging Management Program (AMP) XI.E6

November 30, 2006

- | | |
|---|-----|
| 1. Address NEI's White Paper on GALL AMP XI.E6 | NRC |
| 2. Discuss Additional Operating Experiences | NRC |
| a. LER Number 3051984014, "Kewaunee Reactor Trip Due to a Loss of Power on Instrument Bus IV" | |
| b. Fitzpatrick Root Cause Analysis Report, "Degraded Motor Leads Residual Heat Removal Pump Motors 10P3A(M) and 10P-3C(M)," DER-02-01362. | |
| 3. Proposed Resolution to GALL AMP XI.E6 | NRC |
| 4. Industry Comments on Proposed Resolution | NEI |
| 5. Public Participation | All |
| 6. Closing | NRC |

ENCLOSURE 2

PROPOSED INSPECTION OF ELECTRICAL CABLE CONNECTIONS NOT
SUBJECT TO 10 CFR 50.49 ENVIRONMENTAL QUALIFICATION REQUIREMENT

- GALL Aging Management Program (AMP) XI.E6 will be revised to recommend inspection once in the extended period of operation for electrical cable connections.
- The inspection of a sample of electrical cable connections is to verify that loose connections are not occurring due to thermal cycling, ohmic heating, electrical transients, vibration, chemical contamination, corrosion, or oxidation.
- This inspection will provide additional assurance that either aging of metallic cable connections is not occurring or existing the maintenance program is effective such that a specific AMP is not warranted.
- The inspection should include thermography, resistance measurements, or other appropriate testing methods.
- The inspection is applicable only to nuclear power plants that have not experienced loose connections due to aging.
- The applicant should provide an acceptable sample size of cable connections.
- If indications of any degradation are identified, corrective action must be implemented including sample size expansion.
- Should evidence of significant aging be revealed by this inspection or previous operating experience, a plant specific AMP will have to be developed and periodic inspection implemented by the applicant with NRC's approval.

Letter to NEI, from Stephen Hoffman, dated January 26, 2007

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NUCLEAR ENERGY INSTITUTE

Project No. 690

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