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AUTH.NAME AUTHOR AFFILIATION
FITZPATRICK,E. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
RECIP.NAME RECIPIENT AFFILIATION
MURLEY,T.E. Document Control Branch (Document Control Desk)

SUBJECT: Informs of plan to change fire protection commitment to reroute CR HVAC power cables following condition identified in LER 90-009,dtd 901019.Justification to support cancellation of subj commitment encl.

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Power Company
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Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
FIRE PROTECTION COMMITMENT TO
REROUTE CONTROL ROOM HVAC POWER CABLES

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Attn: T. E. Murley

November 3, 1993

Dear Dr. Murley:

Pursuant to our recent conversations with NRR staff, the purpose of this letter is to inform you of our plan to change a previous commitment made to the NRC following a condition identified in Licensee Event Report (LER) 90-009, dated October 19, 1990. This condition involved a finding whereby the primary and redundant control room Heating Ventilation and Air Conditioning (HVAC) system for both Units 1 and 2 of the Donald C. Cook Nuclear Plant could be disabled by a single "Appendix R" fire. The specific commitment made to Region III during the Enforcement Conference of November 1990 was to reroute the power cables for the control room HVAC blower motors.

After extensive review, we now believe that the proposed modification will not provide a significant reduction in plant risk and, furthermore, is not required for compliance with 10 CFR Part 50 Appendix R. Attachment 1 to this letter provides detailed justification to support cancellation of the commitment previously made to the NRC.

Sincerely,

E E Fitzpatrick

E. E. Fitzpatrick
Vice President

de

Attachment

090031

A006
1/1

cc: A. A. Blind
G. Charnoff
J. B. Martin
NFEM Section Chief
NRC Resident Inspector - Bridgman
J. R. Padgett

bc: S. J. Brewer
D. H. Malin/K. J. Toth
J. B. Kingseed/J. M. Girgis
S. P. Hodge/J. D. Grier
M. L. Horvath - Bridgman - w/o attachment
J. B. Shinnock - w/o attachment
W. G. Smith, Jr./S. H. Steinhart
B. A. Wetzel, NRC - Washington, D. C.
AEP:NRC:0692CR
DC-N-6015.1

ATTACHMENT TO AEP:NRC:0692CR

FIRE PROTECTION COMMITMENT TO
REROUTE CONTROL ROOM HVAC POWER CABLES

The modification (RFC 12-3086) to reroute the power cables for the control room HVAC blower motors was initiated in response to the Enforcement Conference of November 1990, and to Licensee Event Report (LER) 90-009, dated October 19, 1990. This LER was the result of a condition wherein the primary and redundant control room HVAC for both Units, fans 1-HV-ACRA1, 1-HV-ACRA2, 2-HV-ACRA1, and 2-HV-ACRA2, could be disabled by a single "Appendix R" fire in Fire Zones 44N, 44S, 51, 52, or 69.

On page 5 of 6 of LER 90-009, under Corrective Actions, it was stated:

> "The long-term corrective action is to institute procedures to cope with fire-induced loss of normal Control Room HVAC. The procedure will provide detailed steps necessary to temporarily repower the fans in case of fire-induced failure. The procedural changes will be coupled with: 1) assuring that MCC's are available and controlled; and 2) assuring that wiring necessary to make the temporary changes is dedicated and conveniently available."

These procedural changes have been completed. Specifically, the Emergency Remote Shutdown Procedures (1,2-OHP 4023.001.001) have been revised to incorporate actions for restoration of control room cooling capability in the event of fire induced HVAC failures. Also, the necessary repair equipment has been made available and alternate Motor Control Center (MCC) power supplies required for cooling restoration have been dedicated for Appendix R use. Therefore, these long-term corrective actions are considered complete.

The NRC, in Inspection Report 90018, characterized the potential loss of control room cooling as "an apparent violation (315/90018-06(DRS); 316/90018-06(DRS) of Sections III.G.3 and III.L of Appendix R to 10 CFR 50." These sections address the design requirements for alternative and dedicated shutdown capability. However, this assessment was determined between September 10 and October 5, 1990, prior to detailed technical evaluations. Technical evaluations that we completed for Donald C. Cook Nuclear Plant by October 18, 1990, clearly demonstrated that alternate shutdown for the affected areas and required process monitoring instrumentation would remain available at the local shutdown indication panels, that ESW would remain procedurally available for control room cooling and would not be impacted by the design basis fire, and that for all cases the operators could achieve hot standby and execute actions to be in hot shutdown from each unit's control room.

Accordingly, reportability was completed on October 19, 1990, pursuant to 10 CFR 50.72 Section (b)(ii)(C) and 10 CFR 50.73 Section (a)(2)(ii)(C) indicating "a condition not covered by the plant's operating and emergency procedures" and not a categorical design deficiency. This conclusion was later implicitly confirmed by the NRC in their Enforcement Conference Report dated December 17, 1990.

Irrespective of the above conclusions, on page 6 of 6 of LER 90-009, where the NRC accepted our reportability determination it was noted:

> "We are also considering protecting or rerouting the HVAC cables of concern as a long-term corrective action."

Subsequently, a design change was initiated to examine the feasibility of rerouting the HVAC cables of concern. We have performed an extensive review of alternative routing schemes for the control room HVAC power cables. This review indicates that the least expensive solution would require TSI wrapping and, the present estimate indicates a total expected cost of approximately $450,000 (fiscal 1992 dollars). Presently, the TSI issue has not been resolved by NUMARC and the NRC and, the remaining solutions are cost prohibitive.

To determine the potential benefits from the proposed modification, a review of the results of the Cook Nuclear Plant Individual Plant Examination of External Events (IPEEE) Fire Probabilistic Risk Assessment (PRA) was completed. The IPEEE Fire PRA considered the postulated control room temperature rise and the mitigating actions which could be reasonably taken by the operators following a loss of control room HVAC. Based upon these compensatory actions and the time available for such actions, the IPEEE found control room inhabitability and control room equipment failures not to be credible events resulting from fire induced HVAC failure. The contribution to core damage frequency from a postulated fire in Fire Zones 44N, 44S, 51, 52, or 69 was found to be insignificant (less than 1.00E-07 per reactor year). In fact, the total fire induced contribution to core damage frequency for Cook Nuclear Plant was found to be 1.61E-07. This represents 0.26% of the total core damage frequency for the Cook Nuclear Plant. Therefore, internal fires are not dominate contributors to core damage.

NUMARC 91-04, dated January 1992, provides recommendations for taking corrective actions relative to the determined mean core damage frequency per sequence group. Under this guidance, there would be no specific corrective action required in response to the condition identified in LER 90-009. Therefore, updating the emergency remote shutdown procedures to include specific operator action upon loss of control room cooling is considered conservative and appropriate.

Based upon the results of the fire PRA, the installation of RFC 12-3086 clearly will not provide a significant reduction in plant risk. In addition, we believe that installation of RFC 12-3086 is not required for compliance with 10 CFR Part 50 Appendix R or for licensing commitments issued under LER 90-009.

In accordance with our procedures and NRC Regulations, a safety review was completed for the proposed cancellation of the subject modification and the above results were confirmed. Therefore, based upon the above reviews, we believe that there is technical justification to support cancellation of subject modification (RFC 12-3086).