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MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

August 15, 1983

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Restart of the Control Complex
Chiller [RDC 70(83)]

Dear Mr. Keppler:

This letter serves as the final report pursuant to 10CFR50.55(e) on the significant deficiency concerning restart of the Control Complex Chiller following either a Loss of Offsite Power (LOOP) or a Loss of Coolant Accident (LOCA). This problem was identified to Mr. Pelke of your office on April 7, 1983, by Mr. E. Riley of The Cleveland Electric Illuminating Company. Our interim report dated May 6, 1983, stated that Gilbert Associates, Inc. (GAI) was evaluating this situation. GAI's evaluation indicated that this situation represents a significant deficiency and GAI subsequently notified Mr. R. C. DeYoung of this via a letter dated June 30, 1983.

This report contains a description of the deficiency, an analysis of the safety implications, and the corrective action to be implemented.

Description of Deficiency

Either a Loss of Offsite Power (LOOP) or Loss of Coolant Accident (LOCA) will cause a trip of the control complex chiller which is operating. This chiller will be inoperable for a minimum of twenty minutes due to protective interlocks. Operator action would be required to start the other chiller. This is in conflict with FSAR Section 9.4.9.5.1a, for a LOOP, which specifies an automatic restart. The failure to restart would result in a loss of control room cooling for approximately eighteen minutes. The temperature reached in the control room by this time could compromise the capabilities of both the control room operator and the safety-related equipment contained therein.

In addition, assuming a single failure in the redundant chiller, the time to restore a chiller would be in excess of twenty minutes. This would create even a more severe temperature problem in the control room.

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Analysis of Safety Implications

Cooling of the control complex is necessary during both normal operations and accident conditions. If cooling capability is lost for a period of time (as described above), temperatures in the control complex would exceed the qualification temperatures of the safe shutdown equipment located therein, thereby compromising the safe operation of the plant. Additionally, the control room operators' abilities to operate safe shutdown equipment may be compromised.

Corrective Action

Gilbert Associates, Inc., the Architect/Engineer, is processing appropriate design changes that will provide automatic restart capability of the Control Complex Chillers. We currently anticipate the design changes to be complete by January 1, 1984, and to be implemented by March 1, 1984.

In addition, GAI is performing a Safe Shutdown System Review. This review will assure that automatic or manual start of support systems is provided for as required by the design. We anticipate completion of this review by September 30, 1983, with any recommendations for further corrective action to be received from GAI by October 14, 1983. Any significant results which may arise from the GAI review will be documented in accordance with our program.

Please call if there are additional questions.

Sincerely,

Murray R Edelman

Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner
NRC Site Office

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