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November 27, 1984

MURRAY R. EDELMAN

VICE PRESIDENT
NUCLEAR

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
Main Steam Isolation Valves
Supplied By The General Electric
Company [RDC 77(83)]

Dear Mr. Keppler:

This letter serves as the final report pursuant to 10CFR50.55(e) on the potential significant deficiency concerning the actuators on the Main Steam Isolation Valves (MSIV) supplied by the General Electric Company (GE) to the Perry Nuclear Power Plant. Mr. E. Riley of The Cleveland Electric Illuminating Company notified Mr. J. Konklin of your office of the potential significant deficiency on July 8, 1983. Previous correspondence on this subject was submitted July 29, 1983, and May 15, 1984.

This report contains a description of the potential deficiency, an analysis of safety implications, and the corrective action being taken. As a result of our analysis of safety implications, it has been determined that this condition is not reportable pursuant to 10CFR50.55(e).

Description of Deficiency

The MSIV actuator, Hiller/Sheffer SA-A034 supplied by GE, failed qualification testing to NUREG 0588. The MSIV was tested as a normal qualification function to evaluate the ability of the actuator to perform its safety-related function for the PWRPPs environments. The actuator was exposed to high levels of gamma radiation and temperatures which may exceed those to which the actuator would actually be subjected. This resulted in hardening of the lubricant which inhibited mechanical motion of the actuator and in the deterioration of various Viton seals and o-rings causing hydraulic and pneumatic leakage.

Analysis of Safety Implication

The identified failure mode restricts actuator operation, however, such a failure would not inhibit closure of the MSIVs. The MSIVs are designed to close in the event of loss of electrical power or loss of pneumatic pressure. Failure of the actuator will cause the MSIV to close. By closing, the MSIV performs its intended safety function of sealing the primary containment and isolating the reactor coolant pressure boundary. Therefore, the identified deficiency is not considered to be reportable.

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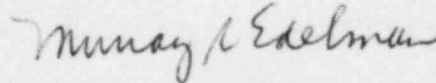
Submittal of the analysis of safety implications for the MSIVs was not made previously pending the results of the qualification testing. This was to ensure that no test failures occurred which affected the ability of the valves to perform their intended safety functions.

Corrective Actions

As a result of the test failure, the seals on the actuators being tested were changed to EPDM material and the lubrication was changed to Super-O-Lube after which the actuators were aged and successfully tested to the requirements of NUREG 0588. The MSIVs were then qualified with these modifications.

Project Organization issued Nonconformance Reports (NR) TAS 45 and TAS 80 to track the nonconforming condition for Unit 1 and NRs TAS 46 and TAS 81 for Unit 2. All MSIV actuators on site will be reworked to replace the existing lubricants and seals with qualified materials. GE issued FDI 134-82411 to implement this change for Unit 1 rework which will be completed by January 31, 1985. Completion of the Unit 2 rework will be consistent with the Unit 2 construction schedule prior to turnover of the affected systems.

Sincerely,



Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. J. A. Grobe
NRC Site Office

Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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c/o Document Management Branch
Washington, D.C. 20555

Records Center, SEE-IN
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339