

IES UTILITIES INC.

March 28, 1994
NG-94-1150

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

Subject: Written Notification of 10 CFR Part 21 Report
Reference: NG-94-0877 dated March 1, 1994

Dear Sir:

This letter provides additional information concerning a defect in accordance with 10 CFR Part 21. This is our report pursuant to Section 21.21(i)(3)(ii) of a defect that was identified with the "C" residual heat removal (RHR) pump motor and is a follow-up to the initial notification faxed to you on March 1, 1994 (reference).

In 1988, General Electric Nuclear Energy (GE-NE) overhauled four RHR pump motors and two core spray pump motors from the Duane Arnold Energy Center (DAEC). The applicable purchase order specified that 10 CFR Part 21 applied. On December 15, 1993, the "C" RHR pump failed to meet its required discharge pressure during the performance of a quarterly surveillance test. It was subsequently discovered on or about January 7, 1994, that the "C" RHR pump motor shaft nut washer tab was not bent to engage the nut. This allowed the nut to loosen with pump vibration and eventually permitted the shaft to lower until the pump impeller was running between 0.002 and 0.004 inches above the pump case versus a normal clearance of about 0.160 inches. This resulted in a degradation of pump performance by about 5% as compared to the pre-operational testing curves. Consequently, a new shaft rotating element, wear ring and hydrostatic bearing were installed due to excessive pump wear and a bent shaft. In addition, the pump mechanical seal and motor thrust and lower radial bearings were replaced.

The pump motors were overhauled at GE's Memphis, Tennessee facility in 1988. It is believed that General Electric failed to bend the locking washer at that time as was required by shop procedures. We have verified that the locking washer tabs are bent on the remaining RHR and core spray pump motors. Also, other checks were performed to verify that pump clearances are within specifications.

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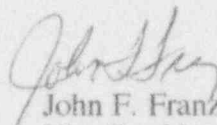
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Our March 1, 1994 notification stated the potential significant safety hazard associated with this defect (locking tab not being bent) was the possible inability of the pump to function as described in the Plant Safety Analysis. The DAEC has since been informed by GE that it performed a plant unique analysis which shows the limiting condition created by this defect is the failure of Division II of the plant 125 VDC System in combination with the failure of the "C" RHR pump, which would result in a peak cladding temperature (PCT) as bounded by the existing Licensing PCT of 1,570 degrees F. Therefore, the DAEC no longer considers this issue reportable under 10 CFR Part 21.

On the basis of this information, the DAEC has also concluded that no significant safety hazard exists and by this letter, is notifying you of our closure. If you have further questions regarding this matter, please contact me or either of the following individuals.

George Carr -- (319) 851-7444
Jeffrey Thorsteinson -- (319) 851-7215

Sincerely,



John F. Franz
Vice President - Nuclear

JFF/LS/ch