

Westinghouse  
Electric Corporation

Water Reactor  
Divisions



Nuclear Technology Division

Box 355  
Pittsburgh Pennsylvania 15230

NS-TMA-2404

March 17, 1981

Mr. J. R. Fair  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
4350 East West Highway  
Bethesda, Maryland 20014

Subject: Centrifugal Charging/Safety Injection Pump Shafts

Dear Mr. Fair:

Reference: NS-TMA-2331 dated October 28, 1980

This letter is an update on the program to investigate the centrifugal charging/safety injection pump shafts.

Westinghouse has completed an evaluation of the analytical work discussed in the referenced letter. It is Westinghouse's engineering judgement that the utilities should consider making specific hardware modification to the affected pumps. As discussed in the referenced letter, a different balance drum locknut design has been developed which more uniformly distributes the stresses in the threaded portion of the shaft. Westinghouse has recommended to our utility customers that the balance drum locknut be replaced on all of the subject pumps, and that the locknut and the pump shaft be replaced on all of the subject pumps which have accumulated more than approximately 500 hours of operation with the old locknut design.

Based on the redundancy of the pumps, randomness of the events, and the fact that normal operation of the pumps in the charging mode without excessive vibration is a continuing demonstration that the pump is available in the event of a safety injection signal, it is Westinghouse's engineering judgement that plants can continue to operate safely within the framework of their Technical Specifications while these recommendations are implemented in an orderly fashion. This basis is now further supported by the analyses, tests, and engineering evaluations performed by Westinghouse. Westinghouse expects that completion of the modification program may take several years due to material, fabrication and site outage requirements.

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Mr. J. R. Fair

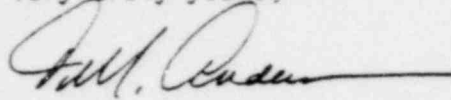
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If you have any questions or require additional details on any aspects of this issue, please contact me.

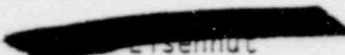
Very truly yours,



T. M. Anderson, Manager  
Nuclear Safety Department

DGM/TMA/jaw

cc:

   
J. H. Sniezek