[illegible] 16, 1977

Docket No. 50-346

Serial No. 401

77-018-000

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



Dear Mr. Keppler:

In accordance with 10CFR Part 21.21(b), this is a report of a defect in a component installed in the Davis-Besse Nuclear Power Station Unit No. 1. The component involved is the auxiliary feed pump turbine.

The auxiliary feed pumps were supplied by Byron Jackson Pump Division. The steam-driven pump turbines were supplied by Terry Corporation to Byron Jackson. In turn, the turbine governors were supplied to Terry Corporation by Woodward Governor Company. The turbine is designated as a Type GS-2, horizontal split casing, helical flow turbine. The turbine governor is identified as a Type PG-PL.

The defect involves the potential for the governing valve to close when it should be open while the turbine is not in service. On October 16, 1977, the governing valve on turbine 1-2 was found in the closed positi when it should have been open. Apparently, excessive vibration of an adjacent startup feed pump caused the governing valve on auxiliary feed pump turbine 1-2 to clos[illegible]. The safety hazard which could be created is the potential for both auxiliary feed pumps, if called upon, to fail to come up to desired speed upon startup in the event both had been unknowi exposed to vibrations of the nature experienced by turbine 1-2. This could result in a complete loss of auxiliary feedwater flow to the steam generators if such flow were required. This in turn could cause signifi cant reactor coolant system pressure/temperature transients, and reactor coolant system heat removal difficulties if substantial decay heat were present in the reactor core.

On November 10, 1977, the deviation was evaluated by Toledo Edison to b a defect. This matter was reported to your Mr. T. Tambling on November and again on November 14.

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There are two identical auxiliary feed pumps with this turbine installed in Davis-Besse Unit No. 1, although only one was affected by the described incident.

The complete corrective action to be taken is to date not defined. The defect is under investigation by the turbine supplier, and corrective action is expected to be completed within two weeks. The corrective action already taken is that during all startup feed pump operations, an operator checks the position of the auxiliary feed pump turbine governing valves every 20 minutes to assure that the auxiliary feed pump turbine governing valves remain in the open position. Auxiliary feed pump turbine 1-1 governor valve has not experienced a similar problem, because it is not adjacent to the startup feed pump. Control room indication is also available for the full open and the full closed governing valve positions.

This information has not been given to other licensees or purchasers.

Yours very truly,

Lowell E. Roe /Sen

Lowell E. Roe
Vice President
Facilities Development

db b/19-20