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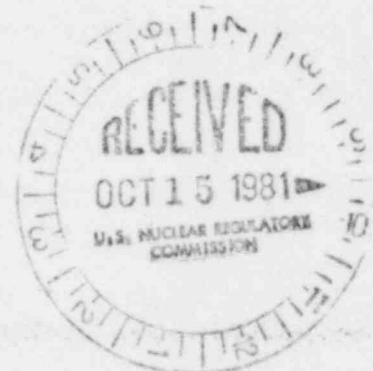
Georgia Power

the southern electric system

W. A. Widner
Vice President and General Manager
Fossil and Hydro Generation

October 9, 1981

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



NRC DOCKET 50-321
OPERATING LICENSE DPR-57
EDWIN I. HATCH NUCLEAR PLANT UNIT 1
10 CFR 21 REPORT—HPCI LUBE OIL CONTROL VALVE

Gentlemen:

On September 9, 1981, GPC filed LER 81-088 with the NRC. This LER concerned defective diaphragms used in a control valve for the lube oil reservoir for the HPCI Terry Turbine used at Plant Hatch Unit 1. Failure of this diaphragm leads to loss of turbine hydraulic oil which causes the turbine stop valve to close and makes HPCI inoperable. It has been concluded by the Plant Hatch staff, SCSI-Nuclear Safety and Licensing Division (NSLD) staff, and the General Office Nuclear Generation staff that the diaphragm problem constitutes a reportable item per 10 CFR Part 21.

The Office of the Vice President and General Manager - Nuclear Generation was notified on October 7, 1981. In the absence of Mr. J. T. Beckham, Jr., the Vice President and General Manager, Fossil and Hydro Generation, Mr. W. A. Widner received the notice. Initial contact by telephone was made to the NRC on the same day, October 7, 1981.

With this letter you will find Attachments A and B. Attachment A summarizes the events, gives our evaluation of the defect, and gives our corrective action. Attachment B is a copy of General Electric Service Information Letter 358 and is provided for your information.

If you need further information, please contact this office.

Very truly yours,

W. A. Widner
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PLANT HATCH - UNIT 1
HIGH PRESSURE COOLANT INJECTION SYSTEM (HPCI)
DIAPHRAGM CONTROL VALVE FOR TERRY TURBINE
10 CFR 21 EVALUATION

Initial Report:

On September 9, 1981, Georgia Power Company (GPC) filed Licensee Event Report (LER) 81-088 with the Nuclear Regulatory Commission (NRC). This LER concerned defective diaphragms used in a control valve for the lube oil reservoir for the Terry Turbines used at Plant Hatch - Unit 1.

Summary of Events:

In 1977, Georgia Power Company ordered spare HPCI parts from the General Electric Company (GE). These parts included one 1/2" Robertshaw control valve model VC 210-BLR. In February 1978, the control valve was received with a product quality certification from GE. The valve was then placed into storage in the warehouse.

On July 12, 1981, GPC installed the above Robertshaw diaphragm control valve to correct a previously reported HPCI inoperability problem (reference LER 50-321/1981-068.) At that time GPC believed the correct valve had been furnished. On July 21, 1981, and again on August 11, 1981, diaphragm failures caused HPCI to be declared temporarily inoperable. In each instance RCIC, ADS, CSS and LPCI were operable per the action statement in Plant Hatch Unit 1 Technical Specification 3.5.1.

In August, the plant engineer with responsibility for the HPCI system received a copy of Service Information Letter 358 which advised that difficulties had been experienced in ordering replacement diaphragms for the Robertshaw valve (Model VC-210) used in the HPCI Terry Turbine mechanical/hydraulic overspeed complex. Projected material availability was slated for June 1981. GE was promptly contacted by the responsible engineer in order to obtain the correct diaphragm. GPC was verbally advised that the diaphragms would not be available until October 1981. In the meantime GPC obtained from GE replacement diaphragms with 100 cycle life (instead of the original 1000). These reduced-life diaphragms were used (with one failure) until the original 1000 life diaphragms were installed on September 17, 1981.

Evaluation:

10 CFR Part 21 defines defect as:

- "(1) A deviation in a basic component delivered to a purchaser for the use in a facility or an activity subject to the regulations in this part if, on the basis of an evaluation, the deviation could create a substantial safety hazard.
- (2) The installation, use, and operation of a basic component containing a defect as defined above."

In February 1978, GE delivered a 1/2" Robertshaw control valve Model VC 210-BLR for use as a spare HPCI part. After installation of the valve in July 1981, GPC discovered that the valve had been supplied with a diaphragm not compatible for its intended use.

The Robertshaw valve was used in the HPCI Terry Turbine mechanical/hydraulic overspeed complex. Failure of the diaphragm caused a loss of turbine hydraulic oil. The loss of oil caused the turbine stop valve to close which made HPCI inoperable.

With the problems experienced with the diaphragm, even though HPCI was operable, there was no assurance that HPCI would remain operable. It has been postulated that the plant while operating within the Technical Specifications and assuming an accident in conjunction with a single failure may not have been able to perform a required safety function.

Conclusion:

It is concluded that the valve delivered by GE had a defect because it did not contain the proper diaphragm. Since the plant could have been operated in such a manner that the deviation could have created a substantial safety hazard, GPC concludes that this event is reportable under the provisions of 10 CFR Part 21.

Corrective Action

The diaphragm was replaced with the recommended 1000 cycle diaphragm on September 17, 1981.