

P. O. BOX 33189

# DUKE POWER COMPANY

GENERAL OFFICES

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TELEPHONE: AREA 704  
373-4011

August 13, 1982

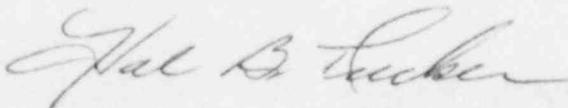
Mr. James P. O'Reilly, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Re: Oconee Nuclear Station  
Docket No. 50-270

Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-270/82-10. This report is submitted pursuant to Oconee Nuclear Station Technical Specification 6.6.2.1.a(2) which concerns an operation subject to a limiting condition for operation which was less conservative than the least conservative aspect of the limiting condition for operation established in the Technical Specifications, and describes an incident which is considered to be of no significance with respect to its effect on the health and safety of the public. My letter of August 5, 1982 addressed the delay in preparation of this report.

Very truly yours,



H. B. Tucker, Vice President  
Nuclear Production Department

JCP/php  
Attachment

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

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NRC Resident Inspector  
Oconee Nuclear Station

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Washington, D. C. 20555

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REGION II  
ATLANTA, GEORGIA

DUKE POWER COMPANY  
OCONEE NUCLEAR STATION UNIT 2

Report Number: RO-270/82-10

Report Date: August 13, 1982

Occurrence Date: July 22, 1982

Facility: Oconee Unit 2, Seneca, South Carolina

Identification of Occurrence: Upper Surge Tank water level fell below Technical Specification minimum of 5 feet.

Conditions Prior to Occurrence: 26% FP

Description of Occurrence: On July 22, 1982, at 1723 while investigating erroneous instrument readings, the Upper Surge Tank (UST) was determined to have less than 5 feet of water.

Apparent Cause of Occurrence: The low water level was caused by a suction relief valve on the "2B" Main Feedwater Pump (MFWP) that was stuck open, apparently since a Reactor Trip at 1054. Recirculation with abnormally low UST level created the erroneous UST instrument readings.

This incident was the result of two factors: one being the loss of inventory through the stuck open relief valve; the other being the high UST temperatures causing the loss of level indication. The reason for the valve lifting was due to no discharge flow path for the MFWPs upon a Reactor Trip. When the Reactor trips, the main feedwater valves to each Once Through Steam Generator (OTSG) shut to allow the OTSG level to reduce to 25 inches on the startup range. Normally, the MFWP's minimum recirculation control valves would open to provide the minimum flow required by the MFWPs. However, on this unit the recirculation control valves had been manually isolated due to excessive leakage. Therefore, with no flow path available, the suction relief valve lifted at its setpoint of 700 psig.

The investigation also revealed high temperature in the UST which caused several computer alarms to provide erratic and erroneous indications, due to the flashing of the reference legs. The high temperatures were caused by placing the unit in Feedwater Cleanup which recirculates the feedwater through the UST and provides the minimum flow required by the FWP. This higher temperature water coupled with the low level in the UST resulted in the higher than normal temperatures in the UST. As the unit started up and after reaching 26% power, the feedwater demand to the OTSGs was sufficient to secure from Feedwater Cleanup and the UST temperatures then began to decrease.

Analysis of Occurrence: During the period when the UST could not be determined to be greater than 5 feet, the normal source of water to the Motor Driven Emergency FWP's was degraded. However, the Turbine Driven Emergency FWP was operable and was able to supply the required flow rate for the most limiting transient. An adequate supply of water was available, without credit for the

UST throughout the incident from the hotwell and the CST. In addition, the unit was also making up at a rate of 200 gpm. The capability exists to cross-connect Unit 1 with Unit 2 to provide Emergency Feedwater flow to Unit 2's steam generators. Therefore, with sufficient water available from several sources and with the capability to feed water into the steam generators, the health and safety of the public were not jeopardized by this incident.

Corrective Action: The "2B" MFWP was secured and isolated, the suction relief valve was reseated, and the "2A" MFWP was started. After the USTs were cooled, the level instrumentation was repaired, recalibrated, and returned to service. At 1948, the UST levels were returned above 5 feet.

A plant modification is planned to route the MFWP recirculation to the Hotwell in lieu of the UST. Therefore, the UST water will not be heated and affect level instrumentation.