

USNRC REGION II
ATLANTA, GEORGIA

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April 14, 1983

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Re: Oconee Nuclear Station
Docket No. 50-270

Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-270/83-03. This report is submitted pursuant to Oconee Nuclear Station Technical Specification 6.6.2.1.b(2) which concerns operation in a degraded mode permitted by a limiting condition for operation, 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.

Very truly yours,

H.B. Tucker / BH

Hal B. Tucker

JCP/php
Attachment

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

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Mr. J. C. Bryant
NRC Resident Inspector
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Mr. E. L. Conner, Jr.
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Duke Power Company
Oconee Nuclear Station

Report Number: RO-270/83-03

Report Date: April 14, 1983

Occurrence Date: March 15, 1983

Facility: Oconee Unit 2, Seneca, South Carolina

Identification of Occurrence: Failure of 2HP-24 to open fully during functional testing; one independent train technically inoperable

Conditions Prior to Occurrence: 59% FP

Description of Occurrence: On March 15, 1983 at approximately 1425 valve 2HP-24 (High Pressure Injection Suction Valve from the Borated Water Storage Tank) was declared inoperable when it failed to fully open during its Functional Test. This made one independent High Pressure Train inoperable, thus constituting a degraded mode per Technical Specification 3.3.1.b.(2).

On March 14, 1983 Unit 2 tripped. During the trip recovery, valve 2HP-24 was opened to supply water to the High Pressure Injection (HPI) Pumps. A review of the Unit 2 alarm summary revealed that 2HP-24 never reached full open position. Based on this discovery, an operational valve functional test was done on the valve the next day. When 2HP-24 was cycled for this test, the valve only opened partially. Manual operation of the valve was attempted but with no success. Eventually, the valve operator was removed and the valve was mechanically "jacked" open. Once the valve was fully open, in its ES position, the valve was declared operable. Presently 2HP-24 remains "jacked" fully open and the stem is mechanically clamped. It cannot be repaired while the unit is operating.

Apparent Cause of Occurrence: Subsequent examination of the valve revealed a bent valve stem. The apparent cause of the bent stem is that the valve operator continued to close the valve after the valve disc had seated. The closing torque switch setting was 1.5. Thus, the cause of this incident is classified as component failure.

This is the second incident on valve 2HP-24. On March 9, 1983, 2HP-24 failed to open during its quarterly functional test. The valve packing had to be loosened and the valve stem lubricated before the valve operated successfully (see RO-270/83-04). It is possible that the stem was slightly bent at that time, thus causing that incident also.

Analysis of Occurrence: Valve 2HP-24 and 2HP-25 provide the HPI pumps with suction from the Borated Water Storage Tank. During the time 2HP-24 failed to remotely open 2HP-25, the redundant valve was operable. Had an Engineered Safeguards event occurred, 2HP-25 would have opened to provide the HPI pumps with suction from the Borated Water Storage Tank. The health and safety of the public were not endangered by this occurrence.

Corrective Action: Valve 2HP-24 was mechanically "jacked" open to return the valve to operability. It will be repaired on the next outage of sufficient length.

The valve operators will be replaced on unit valves HP-24 and HP-25 with environmentally qualified valve operators. Prior to this replacement, design criteria for the valve operator will be recalculated to ensure the operator is not oversized. Dominion Engineering has been contracted to do these calculations. HP-24 and HP-25 on all units will be inspected and repacked at each unit's next refueling outage. Powell Valve Company, the manufacturer of these valves, will be contacted to see if a harder stem material is available. HP-24 and HP-25, valves and operator, will be placed on a Preventative Maintenance Program after the initial inspection. Torque switches for HP-24 and HP-25 will be set at "2" for coming open and at "1" for going closed. Limit switch settings will be reverified to ensure position indication operates properly for HP-24 and HP-25.