TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401

TVA 40TH ANNIVERSARY OF PEOPLE IN PARTNERSHIP

May 22, 1974

Mr. John F. O'Leary, Director
Directorate of Licensing
Office of Regulation
U.S. Atomic Energy Commission
Washington, DC 20545

Dear Mr. O'Leary:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - ABNORMAL OCCURRENCE REPORT BFAO-74028W

The enclosed report is to provide details concerning a broken yoke which was discovered on the RHR loop I torus spray valve, FCV 74-58, and is submitted in accordance with Appendix A to Regulatory Guide 1.16, Revision 1, October 1973. This event occurred on Browns Ferry Nuclear Plant unit 1 on May 12, 1974.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. F. Thomas
Director of Power Production

Enclosure
CC (Enclosure):
Mr. Norman C. Moseley, Director
Region II Regulatory Operations Office, USAEC
230 Peachtree Street, NW., Suite 818
Atlanta, Georgia 30303

50-259

4711

COPY SENT REGION 2

ABNORMAL OCCURRENCE REPORT

Report No.: BFAO-7428W
Report Date: May 22, 1974
Occurrence Date: May 12, 1974
Facility: Browns Ferry Nuclear Plant unit 1

Identification of Occurrence

At approximately 2:00 p.m. on May 12, 1974, a broken yoke was discovered on the RHR loop I torus spray valve, FCV 74-58.

Conditions Prior to Occurrence

The unit 1 reactor was in the cold shutdown condition.

Description of Occurrence

While draining a section of the RHR line to permit repair work, torus spray valve FCV 74-58 tripped out electrically when an attempt was made to operate the valve. Initial investigation indicated the valve was operating normally and not drawing excessive motor current when operated from the control room. A short time later the valve operator on FCV 74-58 was found separated from the valve stem.

Designation of Apparent Cause of Occurrence

An examination of the yoke indicated the apparent cause of the failure to be an insufficient amount of weld or overstress of the weld.

Corrective Action

A bonnet and motor operator from a similar unit 3 valve were obtained and installed. Post-installation operation and leak checks were performed with satisfactory results. All other similar welded yoke valves were inspected visually and found in satisfactory condition. An analysis is being performed to verify this type of yoke's ability to withstand the imposed stresses.

Analysis of Occurrence

The unit was in the cold shutdown condition, and torus spray operation was not required. If torus spray had been required, water could have been supplied through valve FCV 74-72.

Failure Data

Valves FCV 74-58 and FCV 74-72 were originally supplied to TVA from the manufacturer with Limitorque SMB-000 operators. These operators were found to be too small and were replaced with larger Limitorque operators size SMB-00. On May 28, 1973, which was after the larger Limitorque operators had been installed, it was discovered that the Limitorque mounting bolts on the operators for valves FCV 74-58 and

Failure Data (continued)

FCV 74-72 had failed. Per recommendation of the manufacturer (the Walworth Company) and with the concurrence of General Electric Company, the yoke plates on valves FCV 74-58 and FCV 74-72 were modified from using 5/16" bolts to using 5/8" bolts to secure the Limitorque operator to the valve. The 5/8" bolts are normally used for mounting the larger sized Limitorque operators. This information was previously submitted to F. E. Kruesi by J. E. Gilleland in a letter dated July 3, 1973, concerning a reportable deficiency identified as DDN 144.

The nameplate data for valve FCV 74-58 is as follows:

Walworth Company
Figure No. 5281WE
Size - 4"
ASA - 300 @ 800° F. WOG
Body - WCB
Stem - CR13
Disc - CR13
Seat - N1C11
Serial No. 531542