

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401

June 1, 1973



Mr. F. E. Kruessi, Director
Directorate of Regulatory Operations
U.S. Atomic Energy Commission
Washington, DC 20545

Dear Mr. Kruessi:

On May 2, 1973, TVA made initial report to AEC-DRO Inspector W. S. Little of a failure of Browns Ferry Nuclear Plant unit 1 drywell penetration EF, connector 9E. In accordance with paragraph 50.55(e) of 10 CFR 50, we submit the following formal report of the failure which was discovered on April 23, 1973.

The failure of the unit 1 drywell penetration connector caused the loss of functional capability of the drywell floor drain sump pumps 1A and 1B, equipment drain sump pumps 1A and 1B, recirculation pump motor 1A and 1B space heaters, equipment handling platform outlet, and valves PCV-63-1, PCV-63-3, PCV-68-80, and PCV-71-2. Investigation revealed that two pins had burned off connector 9E and two holes were burned through the base of the connector, thus rupturing the penetration seal.

The exact cause of the failure is unknown. We are continuing to investigate the failure in order to determine the corrective action to be taken, and we expect to submit a final report on this failure by July 2, 1973.

Very truly yours,

Godwin Williams, Jr.
Godwin Williams, Jr.
Assistant Manager of Power

CC: Mr. Norman C. Messley, Director
Directorate of Regulatory Operations
U.S. Atomic Energy Commission
Region II - Suite 818
230 Peachtree Street, NW.
Atlanta, Georgia 30303

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TENNESSEE VALLEY AUTHORITY
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37401



June 1, 1973

Mr. F. E. Kruesi, Director
Directorate of Regulatory Operations
U.S. Atomic Energy Commission
Washington, DC 20545

Dear Mr. Kruesi:

On May 3, 1973, TVA made initial report to AEC-DRO Inspector W. S. Little of the failure of a channel A Traveling Incore Probe (TIP) cable and detector at Browns Ferry Nuclear Plant unit 1. In accordance with paragraph 50.55(e) of 10 CFR 50, we are submitting the enclosed formal interim report of the failure. We expect to submit the final report by July 10, 1973.

Very truly yours,

Godwin Williams, Jr.
Godwin Williams, Jr.
Assistant Manager of Power

Enclosure

CC (Enclosure):

Mr. Norman C. Moseley, Director
Directorate of Regulatory Operations
U.S. Atomic Energy Commission
Region II - Suite 818
230 Peachtree Street, NW.
Atlanta, Georgia 30303

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Browns Ferry Nuclear Plant Unit 1 Deficiency Report

CHANNEL A TIP FAILURE

On the morning of May 2, 1973, TIP machine A drive cable and detector were found damaged. The detector had been severed from the cable.

It is believed that operation of channel A and B of the TIP system was initiated manually from the unit 1 control room. At that time the containment was pressurized to 49 psig during GE No. 14 test of the integrated leakage rate then in progress. Operation of a TIP channel requires that a ball valve be open in the guide tube to the drywell. Apparently the containment pressure was applied down the guide tube containing the probe through the open ball valve to the operating mechanism of the chamber shield limit switch. This limit switch normally stops further withdrawal when the detector on the end of the TIP cable is withdrawn past the switch operating mechanism and through the shield. Design of the limit switch operating mechanism, however, would allow the pressure to hold the mechanism against the switch actuator button and prevent detection of further withdrawal. Failure of the shield limit switch to stop the drive mechanism appears to have allowed the channel A detector to be pulled into the drive mechanism where the drive gear probably severed the cable. The channel B detector was pulled past its shield limit switch but did not enter its drive unit.

TVA and GE are in the process of determining the safety implications of this failure and the corrective measures required. A final report on this failure is expected to be submitted by July 10, 1973.