

June 6, 1973

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

Dear Mr. Kruesi:

On May 7, 1973, TVA notified Directorate of Regulatory Operations Region II office by telephone of what was believed to be a reportable deficiency in a cable connector at the Browns Ferry Nuclear Plant. In accordance with paragraph 50.55(e) of 10 CFR 50, we are submitting the enclosed formal report of the deficiency.

Very truly yours,

J. E. Gilleland

J. E. Gilleland
Assistant to the 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

ENCLOSURE

BROWNS FERRY NUCLEAR PLANT UNIT 1
REPORTABLE DEFICIENCY - FINAL DEFICIENCY REPORT
FAILURE OF CABLE CONNECTOR E5 FOR DRYWELL BLOWER 1A4 AT PENETRATION EA

Drywell blower 1A4 was in service to support the Primary Containment Leak Rate Test. On May 4, 1973, a ground was detected on 480V shutdown board 1A. It was traced to the motor control center (MCC) feeder compartment for drywell blower 1A4. The source of the ground was traced to the power leads for the drywell blower. These power leads are routed through electrical penetration EA, connection E5-5E. Further checking showed that a 10,000-ohm resistance path existed from B phase to the shell of connector E5 (cable half of the connector outside the drywell). The connector in question had been potted following normal procedures. The connector was cut away from the cables and was tested after heating. The resistance path was then measured to be 5,000 ohms. After cooling to ambient temperature, the resistance increased to 10,000 ohms.

The potting compound was removed from the connector, and the connector was retested. The resistance path had changed from 10,000 ohms to 50 megohms. This was measured at 500V DC with a portable megger.

It was concluded that some impurity was in the connector prior to potting. After the potting compound was removed and replaced, the anomaly no longer existed.

Since this drywell blower is powered from an ungrounded system, no loss of function would occur from this single ground. There are 10 drywell blowers installed, eight of which are required for continued power operation, but serve no safety function during a design basis accident.

In order to assure that the other connectors for Unit 1 do not have similar defects, TVA will monitor the ground detectors during the preoperational and startup test programs. In-service conditions will be sufficiently severe during these programs to ferret out those connectors that may have a similar defect. Future connector potting will be more closely controlled and installed in accordance with a procedure now being developed for the Browns Ferry Construction Quality Assurance Manual.