

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401



July 6, 1973



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

Dear Mr. O'Leary:

Subject: TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT
UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE
DPR-33 - ABNORMAL OCCURRENCE REPORT BFAO-731W

The purpose of this report is to provide details concerning the failure of a refueling interlock at Browns Ferry Nuclear Plant Unit 1 on June 28, 1973.

Description of Incident

During initial fuel loading of unit 1, the reactor operator and a General Electric Company representative in the control room noted that the control rod permissive light remained lit when the fuel grapple on the refueling platform was moved over the reactor pressure vessel to load the 43rd fuel element into the core. A limit switch which had failed to actuate properly was manually actuated to obtain a rod block, and the suspended fuel element was properly positioned in the core. Further fuel loading operations were suspended.

Investigation and Corrective Action

The cause of the trouble was immediately traced to a limit switch adjustment on the refueling platform. The function of the switch is to prohibit control rod withdrawal when the loaded refueling platform is over the core. The limit switch had functioned correctly when loading the previous (42nd) fuel assembly.

Before loading the 42nd fuel assembly, the power supply cable to the refueling platform had caught under the platform frame and had been freed. A visual inspection and functional check at the time did not reveal any derangement. In retrospect, it appears the refueling interlock switch had loosened or misaligned slightly when the switch actuating arm passed over the captured power cable.

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The interlock switch was readjusted to properly perform by repositioning the actuating arm. The tension on the power supply cable reel was increased to prevent entanglement with the moving platform.

This switch, identified as "refueling interlock, switch No. 1," was subsequently surveillance-tested. An adjacent mounted interlock switch, identified as "refueling interlock, switch No. 2," which also passed over the power cable was also visually inspected and surveillance-tested. Upon satisfactory completion of these surveillance tests and review by the Plant Operations Review Committee, fuel loading was resumed.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Coffey for
E. F. Thomas
Director of Power Production

CC: Mr. Norman C. Moseley, Director
Region II Regulatory Operations Office
Atomic Energy Commission
230 Peachtree Street, NW.
Atlanta, Georgia 30303