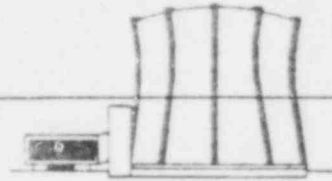


TEXAS A&M UNIVERSITY

NUCLEAR SCIENCE CENTER
COLLEGE STATION, TEXAS 77843



25 June 1979

Mr. G. L. Madsen
Office of Inspection and Enforcement
Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

Ref: Docket No. 50-128

Subject: Failure of an Experiment Safety Circuit Reported 6-15-79

Dear Mr. Madsen:

Enclosed is a final report of a reportable occurrence observed during surveillance testing of scram circuits at the NSCR. This report is submitted in compliance with Section 6.4 and 1.8.c of change No. 11 to the Technical Specifications, Facility License R-83 for the Nuclear Science Center, Texas A&M University.

Respectfully,

Donald E. Feltz
Associate Director

cc: R. R. Berg, Chairman
Reactor Safety Board
Texas A&M University

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A Report of the Failure of an Experiment Scram Circuit

Reportable Occurrence

On 15 June 1979 during surveillance testing of scram circuits, an experiment scram circuit failed to function properly. The circuit is associated with the Beam Port No. 4 neutron radiography cave entry door. This circuit provides a reactor scram upon entry if the reactor is positioned within 18 inches of the beam port target. The reactor was not operating at the time.

Failure Analysis

The failure of the scram circuit was due to a malfunction of the "Experiment Scram Reset" switch on the reactor console. The switch failed to mechanically switch contacts and dust was observed on the moving parts of the switch.

Conclusions and Corrective Actions

The switch was cleaned and immediately functioned properly. Other switches on the reset panel were also cleaned to prevent possible malfunctions. The switch was tested daily for the next 5 days of reactor operation without a failure. This problem is not expected to reoccur due to a recent change in the reactor console instrument cooling system. The present console instrument cooling system produces a positive pressure filtered air flow through the console. This greatly reduces the dust collection within the console when compared to the old system that created a negative pressure within the console, thus drawing in unfiltered air through open or poorly sealed areas of the console.

In addition to scheduled surveillance, the beam port No. 4 experiment scram circuit will be checked when the reactor is positioned within 18 inches of the beam port target.