



Charles L. Hosler
 Senior Vice President for Research
 and Dean of the Graduate School

114 Kern Graduate Building
 The Pennsylvania State University
 University Park, PA 16802

July 29, 1991

U. S. Nuclear Regulatory Commission
 ATTN: Document Control Desk
 Washington, D. C. 20555

Re: Tech Spec Violation
 License R-2, Docket No. 50-005

Dear Sir or Madame:

During reactor operation at 1 KW on July 22, 1991 at 1340 hours, the facility exhaust system failed (the system is comprised of two separate fans, one of which is normally on). Section 3.5 of the Penn State Breazeale Reactor technical specifications (t.s.) requires the operation of the facility exhaust system as a limiting condition for operation. This failure is a reportable occurrence under section 1.1.33.b of the facility's t.s.

The cause of this failure was breakdown of the insulation on the wiring that supplies power from the console exhaust system control switches to the system relay panel. A workman running wiring for a computer system disturbed existing wiring causing a short and exhaust sytem failure (fan stopped and louvers closed). This failure would not have prevented the emergency exhaust system (a separate system) from operating if required.

This failure occurred during a 15 minute reactor run; the workman running the wire reported seeing an arc in the cable tray and by the time the reactor staff's investigation revealed the failure of the facility exhaust system the reactor was shutdown. The staff assured the operability of the west fan (this fan had not been on during the failure of the east fan) and resumed operations. The east fan wiring was repaired the next day.

Pending NRC approval, installation of a new reactor control system will occur during 1991. Failure of a facility exhaust fan will lead to a reactor scram with the new control system. Also, all existing wiring for the facility exhaust system will be replaced.

NRC Region I was notified on July 22, 1991 by phone contact with Mr. Ebe McCabe, the duty officer, and by a fax sent to Region I July 23, 1991.

Sincerely,

Dr. Charles L. Hosler, Jr.
 Senior Vice President for Research
 and Dean of the Graduate School

CLH/TLF

cc. Region I Administrator
 M. M. Reischman
 M. H. Voth
 E. H. Klevans

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