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FROM: Metropolitan Edison Co. Reading Pa. 19603 R.C. Arnold	DATE OF DOC 5-1-75	DATE REC'D 5-9-75	LTR XX	TWX	RPT	OTHER
TO: Director, Division of Reactor Licensing	ORIG 1 signed	CC 1	OTHER	SENT AEC PDR XX SENT LOCAL PDR XX		
CLASS	UNCLASS XXX	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-289	

DESCRIPTION: Ltr concerns abnormal occurrence number AO 50-289/75-12 on 4-21-75, Failure of the 1B Reactor Building Emergency Cooling River Water Pump to start on an ESAS signal...

ENCLOSURES:

POOR ORIGINAL

PLANT NAME: Three Mile Island Unit 1

FOR ACTION/INFORMATION WTM 5-9-75

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May 1, 1975
GQL 1011

Director
Division of Reactor Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Operating License No. DPR-50
Docket No. 50-289

In accordance with Technical Specifications for the Three Mile Island Nuclear Station Unit 1 we are reporting the following abnormal occurrence:

(1) Report Number: AO 50-289/75-12

(2a) Report Date: May 1, 1975

(2b) Occurrence Date: April 21, 1975

(3) Facility: Three Mile Island Nuclear Station Unit 1 (TMI-1)

(4) Identification of Occurrence:

Title: Failure of the 1B Reactor Building Emergency Cooling River Water Pump to Start on an ESAS Signal

Type: An abnormal occurrence as defined by the Technical Specifications, paragraph 1.8d, in that failure of the 1B Reactor Building Emergency Cooling River Water Pump to start on an ESAS Signal threatened to cause an Engineered Safety feature or system to be incapable of performing its intended function.

(5) Conditions Prior to Occurrence:

The reactor was at steady state power with major plant parameters as follows:

Power: Core: 99%

Elec.: 850 MW (Gross)

RC Flow: 136 x 10^6 lbs/hr

RC Pressure: 2130 psig

RC Temp.: 579°F

PRZR Level: 240 in.

PRZR Temp.: 655°F

(6) Description of Occurrence:

During a High and Low Pressure Injection Surveillance Test (1303-5.2), Reactor Building Emergency Cooling River Water Pump RR-P1B failed to start on an automatic Engineered Safeguards test signal. The pump was then successfully started manually from the control room using the control room switch.

The redundant RR-P1A pump was then tested to verify operability.

Initial investigations detected no problems in the Engineered Safeguards logic relay and connections in the breaker control circuit were checked and found to be tight. The test was resumed and the pump started successfully on all three logic combinations.

(7) Designation of Apparent Cause of Occurrence:

Further investigation showed that the apparent cause of the occurrence is component failure in that an intermittent contact on the control room switch caused the failure of the pump to start.

(8) Analysis of Occurrence:

It is believed that the failure of the RR-P1B pump did not represent a threat to the health and safety of the public as RR-P1B could be started from the control room, the redundant RR-P1A pump was available, and one reactor building emergency cooling river water pump is sufficient to supply emergency cooling water in the event of a loss of coolant accident.

(9) Corrective Action:

Immediate corrective action was taken as described above to return the pump to service. Further, a Special Operating Procedure was implemented to require that voltage measurements be taken to verify the contact in question is closed after each operation of the RR-P1B control switch. Also the type contact in question was verified to be closed on other components using the same type control switch (BS-P1A, BS-P1B, DH-P1A, DH-P1B, and RR-P1A).

The Plant Operations Review Committee (PORC) met following the occurrence, reviewed and approved the immediate corrective actions, and in addition recommended as long term preventative actions that:

a. The control switch for RR-P1B be replaced and the cause of the intermittent contact be determined at that time.

b. Should the investigation of the RR-P1B switch determine that a potential problem exists with the five similar switches listed above, appropriate corrective actions will be taken (note: at present, it is not believed that such problems do exist).

The Station Superintendent reviewed and approved PORC's findings, and steps have been taken to insure implementation of the long term preventative actions.

(10) Failure Data:

a. Previous Failures:

Abnormal Occurrence Report 50-289/75-02 also dealt with a failure of RR-P1B to start on an automatic ESAS signal. Although it was originally thought that the failure to start was due to loose connections in the 4KV breaker, it may actually have been due to the faulty control switch.

b. Equipment Identification:

General Electric Co. SB10 Switch

Sincerely,

R. C. Arnold

R. C. Arnold
Vice President-Generation

RCA:RSB:tas

cc: Office of Inspection and Enforcement, Region 1
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

File: 20.1.1 / 7.7.3.5.1

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