

REPORT OF ABNORMAL OCCURRENCE AND/OR INCIDENT

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CONTROL NO: 9427

FILE: INCIDENT REPORT FILE

FROM: Metropolitan Edison Co. Reading, Pa. 19603 R.C. Arnold			DATE OF DOC 9-2-75	DATE REC'D 9-5-75	LTR XX	TWX	RPT	OTHER
TO: NRC			ORIG 1 signed	CC	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 reporting AO-50-289/75-28' on 8-23-75 re failure of pressure switch PS-22 in the control circuit for MS-V-13B....

ENCLOSURES:

PLANT NAME: Three Mile Island Unit 1

FOR ACTION/INFORMATION

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METROPOLITAN EDISON COMPANY

SUBSIDIARY OF GENERAL PUBLIC UTILITIES CORPORATION

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603

TELEPHONE 215 - 929-3601

September 2, 1975
GQL 1470

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

Dear Sir:

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

In accordance with the Technical Specifications of our Three Mile Island Nuclear Station Unit 1 (TMI-1), we are reporting the following abnormal occurrence.

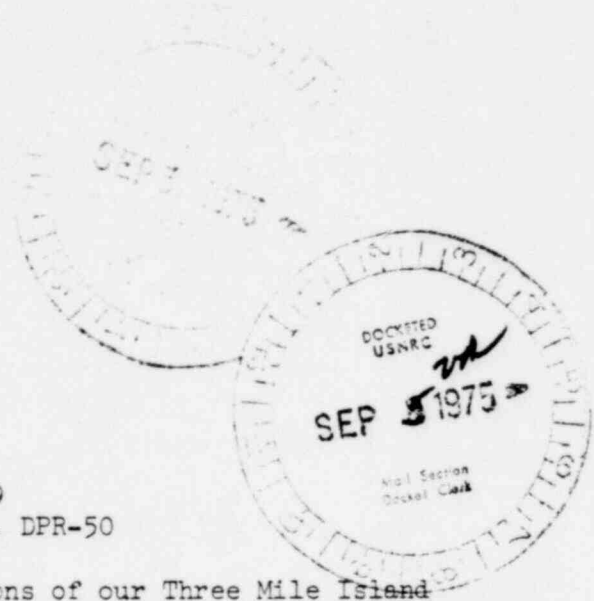
- (1) Report Number: AO 50-289/75-28
- (2a) Report Date: September 2, 1975
- (2b) Occurrence Date: August 23, 1975
- (3) Facility: Three Mile Island Nuclear Station Unit 1
- (4) Identification of Occurrence:

Title: Failure of pressure switch PS-22 in the control circuit for MS-V-13B.

Type: An abnormal occurrence as defined by the Technical Specifications, paragraph 1.8d, in that, failure of this pressure switch constituted a failure of a safety feature that threatened to cause the Turbine Driven Emergency Feed Pump to be incapable of performing its intended function.

- (5) Conditions Prior to Occurrence:

Power: Core: 100%
Elect.: 831 MWe (Gross)



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RC Flow: 138×10^6 lb/hr

RC Press.: 2155 psig

RC Temp.: 579°F

PRZR Level: 235 inches

PRZR Temp.: 648°F

(6) Description of Occurrence:

On August 20, 1975, the Turbine Drive Emergency Feed Pump was run for surveillance testing. The pump operated successfully on steam supplied from the "A" Steam Generator through MS-V-13A. When MS-V-13B was opened to test the pump on steam supplied from the "B" Steam Generator, the valve (MS-V-13B) would not stay in the open position. When the OPEN pushbutton was released, the valve would reclose (the valve should remain open until the CLOSE pushbutton is pressed). This inadvertent reclosure of the valve was identified to be a result of failure of a pressure switch used in the control circuit for MS-V-13B and a possible short circuit created by a ground between the 125 VDC bus and the normally open contact for relay 20x/MSV13B. It is believed the possible ground creating the short circuit was caused by steam entry into the electrical portion of the pressure switch.

Immediately, the failed pressure switch was replaced and the turbine drive emergency feed pump was tested using MS-V-13B within 48 hours from time of discovery.

(7) Designation of Apparent Cause of Occurrence:

The apparent cause for the failure was design in that the pressure switch was exposed to a high ambient temperature. The high temperature conditions apparently resulted in material deterioration and subsequent steam leakage into the electrical portion of the pressure switch. The wet, corroded pressure switch caused a ground which, as described above, resulted in the control relay for the valve becoming energized without pressing the CLOSE pushbutton (the relay energizes to close the valve).

(8) Analysis of Occurrence:

The Turbine Driven Emergency Feed Pump was operable from the "A" Steam Generator in that MS-V-13A was operating correctly. MS-V-13A opens in response to an automatic signal unless "A" Steam Generator has a low output pressure <100 psi. If "A" Steam Generator has a low pressure, MS-V-13B opens to start the turbine driven pump provided steam generator outlet pressure is >100 psi. In addition, the DC motor operated valve was available and could have been manually opened to supply the turbine from the "B" Steam Generator. The two half-size motor driven emergency feed pumps were operable and available to supply emergency feed. Based on the above, the pressure switch failure did not threaten the health and safety of the public.

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(9) Corrective Actions:

In addition to the immediate corrective action to replace the faulty pressure switch long term corrective actions are to check the similar pressure switch associated with the "A" Steam Generator for steam leakage. The presently installed pressure switches will be evaluated to determine whether a switch with a higher temperature rating should be used. Pending resolution of the suitability of the present switches, the installed switches will be visually checked once every 2 weeks for steam leakage.

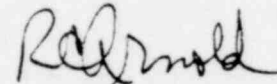
The Plant Operations Review Committee and Station Superintendent have reviewed and approved the above corrective actions and have taken steps to assure their completion.

(10) Failure Data:

Static "O" Ring Pressure Switch
5NN-K5 0 - 1000 psi SP DT

Similar Occurrences: None

Sincerely,



R. C. Arnold
Vice President

RCA/CWS/cas

File: 20.1.1/7.7.3.5.1

cc: Office of Inspection and Enforcement, Region 1

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