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(TEMPORARY FORM)

CONTROL NO: 467

FILE: INCIDENT REPORT

FROM: Metropolitan Edison Co. Reading, Penn R.C. Arnold		DATE OF DOC 1-13-75	DATE REC'D 1-16-75	LTR xxxx	TWX	RPT	OTHER
TO: Directorate of Licensing		ORIG 1-signed	CC	OTHER	SENT AEC PDR <u>xxxxxx</u>		SENT LOCAL PDR <u>xxx</u>
CLASS	UNCLASS xxxxxx	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-289		
DESCRIPTION: Ltr reporting abnormal occurrence #75-01 on 1-3-75 concerning failure of the IC high pressure injection pump (MU - PLC) to start on an ESAS signal.....				ENCLOSURES:			
PLANT NAME: Three Mile Island #1				FOR ACTION/INFORMATION 1-17-75 JGB			

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3-ACRS SENT TO LIC. ASST. <b>TEETS</b>		1-J. RUNKLES, RM E-201 G.T.

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METROPOLITAN EDISON COMPANY

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603

TELEPHONE 215 - 929-3601



JAN 13 1975

Director  
Directorate of Licensing  
U. S. Atomic Energy Commission  
Washington, D.C. 20545

Dear Sir:

Operating License DPR-50  
Docket #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 50-289/75-01
- (2a) Report Date: JAN 13 1975
- (2b) Occurrence Date: January 3, 1975
- (3) Facility: Three Mile Island Nuclear Generating Station Unit 1
- (4) Identification of Occurrence:

Title: Failure of the 1C High Pressure Injection Pump (MU-1C)  
to Start on an ESAS Signal

Type: An abnormal occurrence as defined by the Technical Specifications, paragraph 1.8d, in that the failure of the 1C High Pressure Injection 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: 100%  
Elec.: 863 MW (Gross)  
RC Flow:  $139 \times 10^6$  lb/hr

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RC Pressure: 2155 psig

RC Temp: 579°F

PRZR Level: 235 in.

PRZR Temp.: 655°F

(6) Description of Occurrence:

During a High and Low Pressure Injection Logic and Component Surveillance Test (1303-512) high pressure injection pump MU-PIC failed to start on an automatic Engineered Safety features test signal. The test signal was then cleared and an attempt was made to start MU-PIC from the control room. This also failed. Subsequent investigations revealed that the pump did not start because its circuit breaker had failed to close.

The redundant High Pressure Injection Pump MU-PIA was verified as operable. A spare 4 KV ES breaker was tested and used to replace the circuit breaker that failed. The ESAS test was then repeated and MU-PIC operated satisfactorily.

(7) Designation of Apparent Cause of Occurrence

A visual inspection of the faulty circuit breaker revealed a loose termination on the breaker release internal control wiring causing an open circuit in the spring release coil circuit. As this coil must be energized to close the circuit breaker the motor circuit breaker did not close and the pump did not start.

It is believed that the apparent cause of the occurrence is manufacture in that the termination most likely was not sufficiently tightened when assembled; however, design has not been ruled out as a possible cause of the occurrence in that if sufficient lock washer(s) had been utilized on the termination, a possibly tight termination would not have been able to work its way loose.

(8) Analysis of Occurrence

It is believed that the failure of the MU-PIC High Pressure Injection Pump to start did not represent a threat to the health and safety of the public as only one makeup pump is necessary to supply sufficient emergency cooling water. As the 1A Makeup Pump was lined up for Engineered Safeguards service and was verified as operable and as the 1B Makeup Pump (operating at that time in the normal makeup mode) would have been available for Engineered Safeguards service, sufficient cooling water was available.

(9) Corrective Action

Immediate corrective action was taken as described above to return the effected pump to service. In addition, terminations were tightened on the effected breaker that was removed from service, and the breaker tested satisfactorily.

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The Plant Operations Review Committee (PORC) met shortly after the occurrence and approved the immediate corrective actions, and as a long term preventative action recommended to the Station Superintendent that an inspection be conducted of all 4 KV ES breakers to check for loose connections and to ensure that loose connections are tightened. The Station Superintendent agreed with PORC's recommendation and has taken steps to ensure its implementation, and it is presently anticipated that this inspection will be completed within the next two to four weeks.

In addition, steps will be taken to contact the manufacturer and correct any possible design deficiencies that may exist.

(10) Failure Data

- a. Previous Failures: None
- b. Equipment Identification: Westinghouse Air Circuit Breaker  
50 DH-P 350  
  
Style: 25 Y 444031  
  
Amps: 1200  
  
Rated KV: 4.16  
  
Mech: FAB SPRG

Sincerely,



R. C. Arnold  
Vice President

RCA:RSB:tas

cc: Directorate of Regulatory Operations, Region 1  
U. S. Atomic Energy Commission  
631 Park Avenue  
King of Prussia, PA 19406

File: 20.1.1  
7.7.3.5.1

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