REPORT OF ABNORMAL OCCURRENCE AND/OR INCIDENT

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 9588

FILE: INCIDENT REPORT FIL

FROM:	DATE OF DOC	DATE REC'D	LTR	TWX	RPT	OTHER
Metropolitan Edisn Co. Reading, Pa. R.C. Arnold	9-5-75	9-10-75	XX			

TO:	ORIG	CC	OTHER	SENT AEC PDR	SENT LOCAL PDR
NRC	1 Signed			XXX	XXX

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXX			1	50-289

DESCRIPTION:
A/O # 75-30, on 8-27-75, Concerning Failure of Core Flood Tank "B" Sample line Isolation Valve (CF-V-2B) to close on an Engineered Safeguards Actuation Signal.....

(1 Copy Enclosure Received)

PLANT NAME: Three Mile Island

ENCLOSURES:

FOR ACTION/INFORMATION SAB 9-12-75

BUTLER (L) W/ Copies
CLARK (L) W/ Copies
PARR (L) W/ Copies
KNIEL (L) W/ Copies
SCHWENCER (L) W/ Copies
STOLZ (L) W/ Copies
VASSALLO (L) W/ Copies
PURPLE (L) W/ Copies
ZIEMANN (L) W/ Copies
DICKER (E) W/ Copies
KNIGHTON (E) W/ Copies
YOUNGBLOOD (E) W/ Copies
REGAN (E) W/ Copies
LEAR (L) W/3 Copies
SPELS W/ Copies
W/ Copies

DO NOT REMOVE

ACKNOWLEDGED

INTERNAL DISTRIBUTION

REG FILE
NRC PDR
OGC, ROOM P-506A
GOSSICK/STAFF
CASE
GIAMBUSSO
BOYD
MOORE (L)
DEYOUNG (L)
SKOVHOLT (L)
GOLLER (L) (Ltr)
P. COLLINS
DENISE
REG OPR
FILE & REGION (2)
MIPC/PE (3)
STEELE

TECH REVIEW
SCHROEDER
MACCARY
KNIGHT
PAWLICKI
SHAO
** STELLO
** HOUSTON
** NOVAK
ROSS
IPPOLITO
TEDESCO
J. COLLINS
LAINAS
BENAROYA
VOLLMER

DENTON
** GRIMES
GAMMILL
KASTNER
BALLARD
SPANGLER

ENVIRO
MULLER
DICKER
KNIGHTON
YOUNGBLOOD
REGAN
PROJECT LDR

HARLESS

LIC ASST
R. DIGGS (L)
H. GEARIN (L)
E. GOULBOURNE (L)
P. KREUTZER (E)
J. LEE (L)
M. RUSHBROOK (L)
S. REED (E)
M. SERVICE (L)
S. SHEPPARD (L)
M. SLATER (E)
H. SMITH (L)
S. TEETS (L)
G. WILLIAMS (E)
V. WILSON (L)
R. INGRAM (L)
M. DUNCAN (E)

A/T IND
BRAITMAN
SALTZMAN
MELTZ

PLANS
MCDONALD
CHAPMAN
DUBE (Ltr)
E. COUPE
PETERSON
HARTFIELD (2)
KLECKER
EISENHUT
WIGGINTON
F. WILLIAMS
HANAUER

EXTERNAL DISTRIBUTION

1 – LOCAL PDR Harrisburg, PA.
1 – TIC (ABERNATHY) (1)(2)(10) – NATIONAL LABS
1 – NSIC (BUCHANAN) 1 – W. PENNINGTON, Rm E-201 GT
1 – ASLB 1 – CONSULTANTS
1 – Newton Anderson NEWMARK/BLUME/AGBABIAN
5 – ACRS SENT TO LIC ASST S. Teets
** SEND ONLY TEN DAY REPORTS

1 – PDR-SAN/LA/NY
1 – BROOKHAVEN NAT LAB
1 – G. ULRIKSON, ORNL
1 – AGMED (RUTH GUSSMAN) Rm B-127 GT
1 – J. D. RUNKLES, Rm E-201 GT

1476 258-

7910240 938 S

METROPOLITAN EDISON COMPANY

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603 TELEPHONE 215 – 929-3601

Regulatory File Cy.

September 5, 1975
GQL 1482

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

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

Dear Sir:

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 50-289/75-30

(2a) Report Date: September 5, 1975

(2b) Occurrence Date: August 27, 1975

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

(4) Identification of Occurrence:

Title: Failure of Core Flood Tank "B" Sample Line Isolation Valve (CF-V-2B) to close on an Engineered Safeguards Actuation Signal

Type: An abnormal occurrence as defined by the Technical Specifications, paragraph 1.8d, in that failure of CF-V-2B to close constituted a failure of one component of an engineered safety feature that threatened to cause that feature to be incapable of performing its intended function.

(5) Conditions Prior to Occurrence:

Power: Core: 99%
Elect.: 826 Mwe (Gross)

RC Flow: 139×10^6 lb/hr

RC Press: 2155 psig

RC temp: 580°F

1476 259

3503

PRZR level: 245 inches

PRZR temp: 655°F

(6) Description of Occurrence:

At 1130 hours on August 27, 1975 while performing the Reactor Building Cooling and Isolation Component and Logic Surveillance Test, CF-V-2B (Core Flood Tank "B" Sample Line Isolation Valve) failed to close upon receipt of an Engineered Safeguards actuation signal. Immediately prior to this failure, the valve operated satisfactorily upon receipt of two separate auto Engineered Safeguards test actuation signals.

An attempt was made to close CF-V-2B using the remote pushbutton, but the valve failed to close. CF-V-2B was then closed locally by use of its handwheel, after which the valve cycled properly using the remote pushbutton.

The redundant isolation valve for the sample line CF-V-2B was cycled to verify its operability. CF-V-2B was manually cycled and the valve stem lubricated. An inspection was made of the valve's auxiliary contact blocks to determine if they were binding the opening and closing contactors in any way.

(7) Designation of Apparent Cause of Occurrence:

Initial investigation indicated CF-V-2B failed to close as a result of the valve packing binding against the valve stem, causing it to stop travel by opening the closing torque switch prematurely.

Further troubleshooting revealed that CF-V-2B may have failed to close due to the closing torque switch apparently physically being held open intermittently by splice insulating caps associated with wiring located next to the switch. The wiring adjacent to the switch provides 120 VAC to the valve limit switch compartment heater which is used to remove moisture. Excess wire associated with the heater was coiled in close proximity to the valve closing torque switch contacts, hence the interference of the wire insulating caps with the switch contacts may have in turn caused the valve not to fully close. It is postulated that either one or both of the above problems caused the closing torque switch contacts to open early, preventing CF-V-2B from closing.

(8) Analysis of Occurrence:

It is believed that the failure of CF-V-2B did not represent a threat to the health and safety of the public in that:

a. One containment isolation valve is sufficient to isolate the Core Flood Tank "B" Sample Line in the event of a loss of coolant accident.

b. The redundant containment isolation valve for the Core Flood Tank "B" Sample Line was operable.

c. The redundant isolation valve was closed at the time of the occurrence.

(9) Corrective Actions:

In addition to the corrective actions mentioned above long term corrective actions were:

a. CF-V-2B's torque switch settings have been increased, yet are within acceptable limits, and any wires that would possibly interfere with proper torque switch contact operation have been relocated.

b. The valve CF-V-2B will be repacked to further reduce the possibility of any abnormal binding.

The Plant Operations Review Committee and the Station Superintendent have reviewed and approved the above listed corrective actions and have taken steps to ensure completion of the yet to be completed long term corrective actions.

(10) Failure Data:

Valve Operator:

Limitorque SMB-000

Valve:

Rockwell 3624(F316)JM
Type-Globe

TO: Director
Division of Reactor Licensing
U. S. Nuclear Regulatory Commission

Similar Occurrences: None

Sincerely,

R. C. ARNOLD
Vice President

RCA:CWS:rk
cc: Office of Inspection and ENforcement, Region 1
File: 7.7.3.5.1/20.1.1