

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 12291
FILE: INCIDENT REPORT FILE

FROM: Metropolitan Edison Co. Reading, Pa R.C. Arnold		DATE OF DOC 10-20-75	DATE REC'D 10-23-75	LTR xxx	TWX	RPT	OTHER
TO: NRC		ORIG 1-signed	CC	OTHER	SENT AEC PDR xxx		
					SENT LOCAL PDR xx		
CLASS	UNCLASS xxxx	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-289		

DESCRIPTION:

Ltr reporting abnormal occurrence #75-35 on 10-10-75 concerning obstructed Boric Acid Mix Tank Outlet Line

ENCLOSURES:

PLANT NAME: Three Mile Island #1

FOR ACTION/INFORMATION 10-24-75 JGB *pd*

BUTLER (L) W/ Copies	SCHWENCER (L) W/ Copies	ZIEMANN (L) W/ Copies	REGAN (E) W/ Copies
CLARK (L) W/ Copies	STOLZ (L) W/ Copies	DICKER (E) W/ Copies	LEAR (L) W/ Copies
PARR (L) W/ Copies	VASSALLO (L) W/ Copies	KNIGHTON (E) W/ Copies	SPELS W/ Copies
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INTERNAL DISTRIBUTION

<u>REG FILE</u> NRC PDR OGC, ROOM P-506A GOSSICK/STAFF CASE GIAMBUSO BOYD MOORE (L) DEYOUNG (L) SKOVHOLT (L) GOLLER (L) (Ltr) P. COLLINS DENISE REG OPR FILE & REGION (2) MPC/PE (3) STEELE	<u>TECH REVIEW</u> 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	<u>LIC ASST</u> R. DIGGS (L) H. GEARIN (L) E. GOULBOURNE (L) P. KREUTZER (E) J. LEE (L) M. RUSHEROCK (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) M. INGRAM (L) M. DUNCAN (E)	<u>A/T IND.</u> BRAITMAN SALTZMAN MELTZ <u>PLANS</u> MCDONALD CHAPMAN DUBE (Ltr) E. COUPE PETERSON HARTFIELD (2) KLECKER EISENHUT WIGGINTON F. WILLIAMS HANAUER
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EXTERNAL DISTRIBUTION

1 - LOCAL PDR Harrisburg, Pa	1 - NATIONAL LABS	1 - PDR-SAN/LA/NY
1 - TIC (ABERNATHY) (1)(2)(10)	1 - W. PENNINGTON, Rm E-201 GT	1 - BROOKHAVEN NAT LAB
1 - NSIC (BUCHANAN)	1 - CONSULTANTS	1 - G. ULRIKSON, ORNL
1 - ASLB	NEWMARK/BLUME/AGBABIAN	1 - AGMED (RUTH GUSSMAN) Rm B-127 GT
1 - Newton Anderson		1 - J. D. RUNKLES, Rm E-201 GT
1 - ACRS SENT TO LIC ASST		
** SEND ONLY TEN DAY REPORTS		

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METROPOLITAN EDISON COMPANY

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603

TELEPHONE 215 - 929-3601

October 20, 1975
GQL 1628

Director of Reactor Regulation
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 50-289/75-35
- (2a) Report Date: October 20, 1975
- (2b) Occurrence Date: October 10, 1975
- (3) Facility: Three Mile Island Nuclear Station Unit 1
- (4) Identification of Occurrence:

Title: Obstructed Boric Acid Mix Tank Outlet Line

Type: An abnormal occurrence as defined by the Technical Specifications, paragraph 1.8b, in that the required volume of concentrated boric acid solution to be available for critical operation, in addition to the borated water storage tank (BWST), was not available, which constituted a violation of Technical Specification 3.2.2.

- (5) Conditions Prior to Occurrence:

Power: Core: 100%

Elec.: 841 MWe

RC Flow: 139×10^6 lb/hr.

RC Pressure: 2166 psig

RC Temp.: 579°F

PRZR Level: 230"

PRZR Temp.: 656°F

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(6) Description of Occurrence:

At approximately 0600 hours on October 10, 1975, while the Boric Acid Mix Tank (BAMT) was designated as the tank to meet Technical Specification 3.2.2, an attempt to transfer boric acid from the Boric Acid Mix Tank to the "A" Reclaimed Boric Acid Storage Tank (RBAST) was made in order to raise the level in the "A" RBAST from 472.6 cu. ft. to above 550 cu. ft. Shortly after the attempted transfer began it was noted that there was no decrease in the BAMT level. An immediate investigation revealed that the suction to the Boric Acid Mix Tank Pump was nearly dry, indicating that the tank's outlet line was obstructed. Also, it was discovered that the BAMT mixer propeller was disconnected from the motor shaft.

The line was immediately cleared of obstructions and the flow path from the Boric Acid Mix Tank to the boric acid mix tank pumps was verified; thus, the tank was restored to an operable status within one hour of discovery of the obstruction. The heat trace on the associated lines was checked, the temperatures were found to be satisfactory, and the mixer was repaired to operable status.

(7) Designation of Apparent Cause of Occurrence:

The cause of this occurrence has been determined to be material/procedure in that proper mixing in the BAMT during the previous addition of boric acid crystals did not occur due to mixer failure. Addition procedures did not insure proper mixer action prior to adding boric acid crystals. As a result of the above, undissolved boric acid crystals settled to the bottom of the BAMT, blocking its outlet line.

(8) Analysis of Occurrence:

It has been determined that this occurrence did not constitute a threat to the health and safety of the public in that:

- a. 472.7 cu. ft. of 8700 ppm boron as boric acid solution was available and operable from the RBAST and
- b. the Borated Water Storage Tank was available and operable. This is sufficient to borate the Reactor Coolant System to 1% subcritical margin in the cold condition even at the worst time in core life with a stuck control rod. Additionally,
- c. the Boric Acid Mix Tank was restored to an operable status within one hour.

(9) Corrective Action:

In addition to the immediate action described above, long term corrective actions are as follows:

- a. The mixer will be modified, as recommended by the manufacturer to preclude having similar failures of the mixer.
- b. The addition procedures shall be reviewed by the plant staff and procedure change initiated as necessary to ensure proper boric acid additions to the BAMT. Supplementary instructions and training will be provided to the auxiliary operators to instruct them of the hazards of undissolved boric acid in the BAMT.

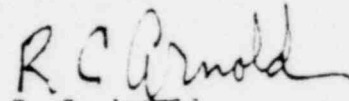
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(10) Failure Data:

Boric Acid Mix Tank Mixer
Model VG7C
Serial No. 600469-1A
Eastern Industries
Div. of Lfe.
Hamden, Connecticut

Similar Occurrences: None

Sincerely,


R. C. Arnold
Vice President

RCA:JMC:tas

cc: Office of Inspection & Enforcement, Region 1

File: 20.1.1
7.7.3.5.1

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