

CONTROL BLOCK 187276 (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 | P | A | T | M | T | 2 | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | | | 5

7 8 9 14 15 25 26 30 57 CAT 58

CONT
01 | REPORT SOURCE | L | 6 | 0 | 5 | 0 | 0 | 0 | 3 | 2 | 0 | 7 | 0 | 2 | 1 | 6 | 8 | 3 | 8 | 1 | 0 | 3 | 1 | 8 | 3 | 9

7 8 60 61 69 69 74 75 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 | On February 16, 1983, while performing surveillance on the fire system valves, it was

03 | realized that the Air Intake Tunnel (AIT) sump level had risen such that there was

04 | standing water on approx. 1/4 of the AIT floor. Investigation determined the AIT De-

05 | luge System had developed leaks. In addition, the AIT Halon System generated a

06 | trouble alarm in 1 of 4 zones. This event is reportable pursuant to Tech Spec

07 | 6.9.1.9(b) due to entry into the Action Statements of Sections 3.7.10.2 and 3.7.10.3.

08 | This event had no effect on the health and safety of the public.

09 | SYSTEM CODE | X | X | 11 | CAUSE CODE | E | 12 | CAUSE SUBCODE | X | 13 | COMPONENT CODE | H | E | A | T | E | R | 14 | COMP SUBCODE | Z | 15 | VALVE SUBCODE | Z | 16

7 8 9 10 11 12 13 18 19 20

17 | LER NO REPORT NUMBER | 8 | 3 | 22 | EVENT YEAR | 8 | 3 | 22 | SEQUENTIAL REPORT NO. | 0 | 0 | 0 | 4 | 26 | OCCURRENCE CODE | 0 | 1 | 3 | 28 | REPORT TYPE | X | 30 | REVISION NO. | 2 | 32 | *Rev. 0 & 1 on file*

7 8 21 22 23 24 26 27 28 29 30 31 32

18 | ACTION TAKEN | A | 18 | FUTURE ACTION | A | 19 | EFFECT ON PLANT | Z | 20 | SHUTDOWN METHOD | Z | 21 | HOURS | 0 | 0 | 0 | 0 | 22 | ATTACHMENT SUBMITTED | Y | 23 | NPD-4 FORM SUB. | N | 24 | PRIME COMP. SUPPLIER | A | 25 | COMPONENT MANUFACTURER | C | 2 | 6 | 8 | 26

7 8 33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 | The Deluge System leaks were freeze-induced due to failed heat tracing. The leakage

11 | along with groundwater inleakage and failed HI and HI-HI sump alarms, allowed the

12 | sump to overflow and submerge 1 or 2 Halon System heat detectors. The deluge leaks

13 | were repaired and the heat tracing and heat detectors were replaced. The level

14 | switch for the HI-HI alarm was recalibrated and the HI alarm was replaced.

15 | FACILITY STATUS | X | 28 | % POWER | 0 | 0 | 0 | 29 | OTHER STATUS | Recovery Mode | 30 | METHOD OF DISCOVERY | B | 31 | DISCOVERY DESCRIPTION | Operator observation | 32

7 8 9 10 12 13 44 45 46 80

16 | ACTIVITY CONTENT RELEASED OF RELEASE | Z | 33 | AMOUNT OF ACTIVITY | N/A | 35 | LOCATION OF RELEASE | N/A | 36

7 8 9 10 11 44 45 80

17 | PERSONNEL EXPOSURES NUMBER | 0 | 0 | 0 | 37 | TYPE | Z | 38 | DESCRIPTION | N/A | 39

7 8 9 11 12 13 80

18 | PERSONNEL INJURIES NUMBER | 0 | 0 | 0 | 40 | DESCRIPTION | N/A | 41

7 8 9 11 12 80

19 | LOSS OF OR DAMAGE TO FACILITY TYPE | Z | 42 | DESCRIPTION | N/A | 43

7 8 9 10 80

20 | PUBLICITY ISSUED | X | 44 | DESCRIPTION | N/A | 45

7 8 9 10 80

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LER 83-004/03X-2
EVENT DATE - February 16, 1983

I. EXPLANATION OF THE OCCURRENCE

On February 16, 1983, while performing Surveillance Procedure 3303-M1, "Fire System Valve Lineup Verification", it was realized that the Unit 2 Air Intake Tunnel (AIT) sump level had risen such that there was standing water on approximately 1/4 of the AIT floor. Investigation determined that the AIT water deluge piping had developed leaks. Therefore, at 0942 hours, the AIT Deluge System was declared inoperable.

In order to commence the above surveillance, the AIT Halon System was disabled to prevent unnecessary actuation of the Halon System and its interlocks with other plant systems. When the Halon System was restored to service at 1010 hours, a trouble alarm was received for one of the four zones. As a result, the zone was declared inoperable.

After declaring the systems inoperable, an hourly firewatch was established and backup fire suppression capability was provided as required by the appropriate Technical Specification Action Statements.

The Deluge System and the Halon System were returned to operable status at 2225 hours on March 1, 1983.

The above conditions resulted in entering the Action Statements of Technical Specifications 3.7.10.2, "Deluge/Sprinkler Systems", and 3.7.10.3, "Halon Systems". Due to the inadvertent entry into the Action Statements and compliance with the Action Statement requirements, this event is considered reportable pursuant to Section 6.9.1.9(b) of the Recovery Technical Specifications.

II. CAUSE OF THE OCCURRENCE

Examination of the Deluge System resulted in locating two leaks. Both were on the upstream side (water charged side) of the respective deluge isolation valves. A 1/2 inch "T" fitting on Deluge Valve FS-V431A ruptured and a 1/2 inch line strainer cracked on Deluge Valve FS-V-429A. The failures are believed to have been caused by freezing of the lines due, in turn, to a failure of their protective heat trace circuits.

Because of the leakage through the fittings and partly due to on-going groundwater leakage into the AIT, the sump water level rose and eventually overflowed onto the AIT floor. As a result, one of two Halon System heat detectors were submerged as well as the AIT Chlorine Monitor Discharge Tube. (Reference LER 83-005/03L-0 regarding Chlorine Monitor inoperability.)

Two conditions existed that, together allowed the sump level to exceed normal levels. First, the AIT normal and emergency sump pumps were de-energized in accordance with the applicable TMI-2 procedures to prevent inadvertent discharge of the yard drains prior to sump water sampling; and second, both the sump's HI and HI-HI level alarms failed. With both level alarms failed, no indication of the rising sump level was available.

An investigation by Plant Engineering determined that the failure of the Deluge line heat tracing was caused by damage to the heat tracing insulation. Apparently, during installation, a section of the insulation was damaged sufficiently that, over a period of years, moisture in the area of the pipe and heat trace caused a ground condition to develop.

The failure of the AIT emergency sump high level alarm switch (AH-LS-5479) was due to its out-of-calibration condition.

The failure of the AIT normal sump high level alarm switch (AH-LS-5480) was due to the displacer being jammed in the stilling well.

III. CIRCUMSTANCES SURROUNDING THE OCCURRENCE

At the time of the occurrence, the Unit 2 facility was in a long-term cold shutdown state. The reactor decay heat was being removed via loss to ambient. Throughout the event there was no effect on the Reactor Coolant System or the core.

IV. CORRECTIVE ACTIONS TAKEN OR TO BE TAKEN

The AIT sump was pumped out and the 1/2 inch fittings on Deluge Valves FS-V-429A and 431A were replaced. Two Halon System heat detectors were replaced. Both the Halon System and the Deluge System were returned to service at 2225 hours on March 1, 1983.

The heat tracing on the deluge valves was replaced, AH-LS-5479 was recalibrated, and the jammed displacer on AH-LS-5480 was replaced on March 11, 1983. Both alarms were tested and functioned satisfactorily.

V. COMPONENT FAILURE DATA

The 1/2 inch fittings were commercial grade components, therefore, no additional information is available.

Heat Tracing - Chemelex Model No. 10 P TV
Heat Detectors - Ferwall
Float Level Switch - Level Trol



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TELEX 84-2386
Writer's Direct Dial Number:

October 31, 1983
4410-83-L-0243

Office of Inspection and Enforcement
Attn: Dr. Thomas E. Murley
Regional Administrator
US Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

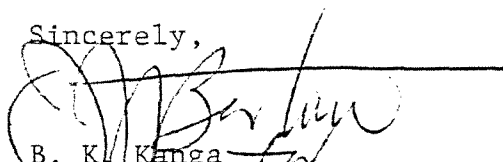
Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Updated Licensee Event Reports

The Licensee Event Reports listed in Attachment 1 have been updated and are enclosed as Attachment 2 to this letter.

If you have any questions, please contact Mr. J. J. Byrne of my staff.

Sincerely,



B. K. Kanga
Director, TMI-2

BKK/JJB/RDW/jep

Attachments

CC: Mr. L. H. Barrett, Deputy Program Director - TMI Program Office
Dr. B. J. Snyder, Program Director - TMI Program Office

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LIST OF UPDATED LICENSEE EVENT REPORTS

- 80-27 Closing of Deluge Isolation Valves FS-V-4-22B, 4-23B, and 4-24B.
- 80-39 Halon bottles below weight.
- 81-11 Inoperability of Nuclear Service River Water Pump "A".
- 81-24 Excessive Reactor Coolant System leakage.
- 81-30 Improper administrative controls for containment penetration isolation valves.
- 81-37 Nuclear Service River Water Pump NR-P-1B inoperability.
- 82-01 Inoperability of the Auxiliary Building Ventilation System.
- 82-23 Actuation of the AIT Halon System.
- 82-41 Inoperability of the Auxiliary Building Ventilation System.
- 83-01 Inoperability of "A" OTSG pressure indicators.
- 83-04 Failure of the AIT Deluge System.
- 83-06 Leak Testing of the Reactor Building Personnel Airlock No. 2.
- 83-14 Actuation of the Air Intake Tunnel Halon System.