

BKW

MAY 04 1983



GPU Nuclear Corporation
Post Office Box 480
Route 441 South
Middletown, Pennsylvania 17057
717 944-7621
TELEX 84-2386
Writer's Direct Dial Number:

March 31, 1983
4410-83-L-0073

Office of Inspection and Enforcement
Attn: Mr. Ronald C. Haynes, 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
Licensee Event Report 83-09/03L-0

Attached please find Licensee Event Report 83-09/03L-0 concerning the actuation of 1 zone of the Air Intake Tunnel Halon System and the resultant trip of the Auxiliary Building and Fuel Handling Building Ventilation Systems on March 3, 1983.

This event concerns Sections 3.7.10.3, 3.9.12.1, and 3.9.12.2 and is considered reportable under Section 6.9.1.9(b) of the Interim Recovery Technical Specifications.

Sincerely,
B. K. Kanga
B. K. Kanga
Director, TMI-2

BKK/SDC/jep

Attachments

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

8304180302 830331
PDR ADOCK 05000320
S PDR

TE 22

Halon system actuates spuriously at Three Mile Island 2.

179

LICENSEE EVENT REPORT

CONTROL BLOCK: 1182979 (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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

CON'T 01 | REPORT SOURCE | L | 6 | 0 | 5 | 0 | 0 | 0 | 3 | 2 | 0 | 7 | 0 | 3 | 0 | 3 | 8 | 3 | 8 | 0 | 3 | 3 | 1 | 8 | 3 | 9

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 | At 2050 hours on March 3, 1983, the Air Intake Tunnel (AIT) Halon System actuated |
03 | inadvertently (1 zone of 4). System interlocks activated the AIT Deluge System and |
04 | tripped the Auxiliary Building and Fuel Handling Building ventilation systems. The |
05 | ventilation systems were restored at 2215 hours on the same date and the AIT Halon |
06 | System restored at 2020 hours on March 11, 1983. This event is reportable pursuant to |
07 | Section 6.9.1.9(b) due to entry into the Action Statements of Tech Spec 3.7.10.3 and |
08 | 3.9.12. This event had no effect on the health and safety of the public. |

09 | SYSTEM CODE | A | B | 11 | CAUSE CODE | X | 12 | CAUSE SUBCODE | X | 13 | COMPONENT CODE | X | X | X | X | X | 14 | COMP. SUBCODE | Z | 15 | VALVE SUBCODE | Z | 16 |
17 | LER/RO REPORT NUMBER | 8 | 3 | 21 | SEQUENTIAL REPORT NO. | 0 | 0 | 9 | 24 | OCCURRENCE CODE | 0 | 3 | 28 | REPORT TYPE | L | 30 | REVISION NO. | 0 | 32 |
18 | ACTION TAKEN | X | 33 | FUTURE ACTION | X | 34 | EFFECT ON PLANT | Z | 35 | SHUTDOWN METHOD | Z | 36 | HOURS | 0 | 0 | 0 | 0 | 37 | ATTACHMENT SUBMITTED | Y | 41 | NPRD-4 FORM SUB. | N | 42 | PRIME COMP. SUPPLIER | A | 43 | COMPONENT MANUFACTURER | Z | 9 | 9 | 9 | 26 |

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 | Examination of the AIT Halon System could determine no cause for the detector trip. |
11 | No additional testing is planned. |
12 | |
13 | |
14 | |

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

16 | ACTIVITY CONTENT | Z | 33 | RELEASED OF RELEASE | Z | 34 | AMOUNT OF ACTIVITY | N/A | 35 | LOCATION OF RELEASE | N/A | 36 |

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

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

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

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

8304180306 830331 PDR ADOCK 05000320 S PDR

NRC USE ONLY

NAME OF PREPARER Steven D. Chaplin

PHONE: (717) 948-8461

Handwritten: 7-25-83

LER 83-09/03L-0
EVENT DATE - March 3, 1983

I. EXPLANATION OF OCCURRENCE

At 2050 hours on March 3, 1983, the Air Intake Tunnel (AIT) Halon System actuated inadvertently. This triggered the actuation of the AIT Deluge System and the tripping of the ventilation supply and exhaust fans for the Auxiliary and Fuel Handling Building. The ventilation fan tripping in both buildings resulted in below Technical Specification minimum allowable exhaust flowrates in both buildings. This placed the unit in the Action Statements of Tech Spec Limiting Conditions for Operation 3.9.12.1 and 3.9.12.2. The ventilation in both the Auxiliary Building and Fuel Handling Building was restored at 2215 hours on March 3, 1983. The AIT Halon System actuation rendered one of the four halon zones out-of-service and thus resulted in placing the unit in the Action Statement of Tech Spec Limiting Conditions for Operation 3.7.10.3.1.

This event is considered reportable under Tech Spec 6.9.1.9(b) due to inadvertent entry into and compliance with the requirements of the above referenced Tech Spec Action Statements.

This LER is similar in many aspects to LER's 82-18 and 82-23.

II. CAUSE OF THE OCCURRENCE

The actuation of one of the four zones of the Air Intake Tunnel Halon System was suspected to have been caused by the "burnout" of a 200 watt incandescent ceiling light located 10 feet directly in front of the pair of ultraviolet detectors for this zone. It was suspected this resulted in ultraviolet detectors (FS-OS-6050-3/4) "tripping" panel 726 and actuation of this halon zone. The AIT Deluge System actuation and the tripping of the ventilation fans all resulted from the design functioning of system interlocks. However, the incandescent bulb "burnout" mechanism could not be verified. Additional investigation could not identify another cause.

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

Immediate

The Auxiliary and Fuel Handling Building ventilation fans were restarted and flowrates returned to Technical Specification Limits at 2215 hours on March 3, 1983.

The AIT System was examined by performing functional tests of the detectors, the alarm circuits, and the activation circuits. This was accomplished by the performance of Surveillance Procedures 4331-R4 "Air Intake Tunnel Halon System Functional Test" and 4331-SA1 "Air Intake Tunnel Halon System Inspection". No electrical discrepancies were identified which would explain the trip. In addition to the system checks, a test was performed to determine

the validity of the bulb "burnout" mechanism. However, the test could not produce a detector trip in the installed configuration.

Long-Term

No additional testing is planned.

V. COMPONENT FAILURE DATA

N/A