

UPDATE REPORT -- PREVIOUS REPORT DATE July 21, 1983

NRC FORM 366 (7-77)

update on problems with ultraviolet light fire detectors

U. S. NUCLEAR REGULATORY COMMISSION

363

LICENSEE EVENT REPORT

NOV 16 1984

B&W

CONTROL BLOCK: 19154112 ①

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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

CON'T
① | REPORT SOURCE | L | ⑥ | 0 | 5 | 0 | 0 | 0 | 3 | 2 | 0 | ⑦ | 0 | 6 | 2 | 1 | 8 | 3 | ⑧ | 1 | 0 | 1 | 2 | 8 | 4 | ⑨

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

① | 2 | On June 21, 1983, the following was determined to be reportable pursuant to Section
② | 3 | 6.9.1.9(b) of the Tech Specs. Between May 26, 1983, and July 20, 1983, the Air
③ | 4 | Intake Tunnel (AIT) Halon System was partially disarmed on 11 occasions. The
④ | 5 | disarming was intentional to protect the system from lightning induced spurious
⑤ | 6 | halon discharged. After passage of the thunderstorm, the AIT Halon System was
⑥ | 7 | restored to a full functional status. These events concern Tech Spec 3.7.10.3.
⑦ | 8 | These events had no effect on the plant, its operations, or the safety of public.

① | 9 | SYSTEM CODE | A | B | ⑪ | CAUSE CODE | X | ⑫ | CAUSE SUBCODE | Z | ⑬ | COMPONENT CODE | Z | Z | Z | Z | Z | Z | ⑭ | COMP SUBCODE | Z | ⑮ | VALVE SUBCODE | Z | ⑯

⑰ | LER/RO REPORT NUMBER | 8 | 3 | ⑱ | EVENT YEAR | 8 | 3 | ⑲ | SHUTDOWN METHOD | Z | ⑳ | SEQUENTIAL REPORT NO. | 0 | 2 | 5 | ㉑ | OCCURRENCE CODE | 0 | 3 | ㉒ | REPORT TYPE | X | ㉓ | REVISION NO. | 1 | ㉔ | ACTION TAKEN | X | ㉕ | FUTURE ACTION | F | ㉖ | EFFECT ON PLANT | Z | ㉗ | ATTACHMENT SUBMITTED | Y | ㉘ | NPRO-4 FORM SUB. | N | ㉙ | PRIME COMP. SUPPLIER | Z | ㉚ | COMPONENT MANUFACTURER | Z | 9 | 9 | 9 | ㉛

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ㉜

① | 0 | On 3 occasions (Reference LER's 82-18, 82-23, and 83-14) the AIT halon system was
① | 1 | set off by lightning flashes. *Insert see next page* As an interim protective action, the susceptible
① | 2 | AIT halon system zone(s) were disarmed during thunderstorms to prevent spurious
① | 3 | discharges. Permanent corrective action, AIT structure louvers have been installed.
① | 4 | Louvers should prevent occurrences of the above events.

① | 5 | FACILITY STATUS | X | ㉞ | % POWER | 0 | 0 | 0 | ㉟ | OTHER STATUS | Recovery Mode | ㊱ | METHOD OF DISCOVERY | Z | ㊲ | DISCOVERY DESCRIPTION | N/A | ㊳

① | 6 | ACTIVITY CONTENT RELEASED OF RELEASE | Z | ㊴ | AMOUNT OF ACTIVITY | N/A | ㊵ | LOCATION OF RELEASE | N/A | ㊶

① | 7 | PERSONNEL EXPOSURES NUMBER | 0 | 0 | 0 | ㊷ | TYPE | Z | ㊸ | DESCRIPTION | N/A | ㊹

① | 8 | PERSONNEL INJURIES NUMBER | 0 | 0 | 0 | ㊺ | DESCRIPTION | N/A | ㊻

① | 9 | LOSS OF OR DAMAGE TO FACILITY TYPE | Z | ㊼ | DESCRIPTION | N/A | ㊽ | 8410230116 841012 PDR ADDCK 05000320 S PDR

② | 0 | PUBLICITY ISSUED | N | ㊾ | DESCRIPTION | N/A | ㊿

NAME OF PREPARER Russ Wells

PHONE (717) 948-8461

58-1e-01
Wells

Rev. 0 on file

LER 83-025/03X-1
EVENT DATE - June 21, 1983

I. EXPLANATION OF THE OCCURRENCE

As a result of discussions with Nuclear Regulatory Commission TMI Program Office personnel, on June 21, 1983, the events described below were determined to be reportable pursuant to the requirements of the TMI-2 Technical Specifications.

<u>Date and Time Disarmed</u>	<u>Date and Time Returned to Service</u>
May 26, 1983, 1357 hours	May 26, 1983, 1915 hours
June 4, 1983, 1500 hours	June 4, 1983, 2200 hours
June 6, 1983, 2133 hours	June 7, 1983, 0602 hours
June 16, 1983, 2200 hours	June 17, 1983, 0558 hours
June 17, 1983, 1341 hours	June 18, 1983, 0820 hours
June 18, 1983, 2030 hours	June 19, 1983, 0610 hours
June 19, 1983, 1645 hours	June 20, 1983, 0550 hours
June 20, 1983, 1823 hours	June 21, 1983, 0432 hours
June 28, 1983, 1735 hours	June 28, 1983, 2130 hours
July 17, 1983, 2145 hours	July 18, 1983, 0400 hours
July 20, 1983, 1533 hours	July 20, 1983, 2116 hours

The disarming was limited to the zone(s), typically 1 or 2 of 4, susceptible to being tripped by local electrical storm activity (lightning). In addition, the zones were disarmed only to the extent that the automatic halon discharge in the given zone(s) was disarmed. All the remaining system functions remained operational, i.e., detection, trip signals, alarm functions, and trip interlocks with 1) the Air Intake Tunnel water deluge system, 2) the Air Intake Tunnel isolation dampers, and 3) the Auxiliary Building and Fuel Handling Building Ventilation Systems. This event is considered reportable pursuant to Section 6.9.1.9(b) due to entry into the compliance with the requirements of the Action Statement for Technical Specification 3.7.10.3.

II. CAUSE OF THE OCCURRENCE

→ The Halon System was intentionally disarmed on the above dates as a preventative measure. This was based on the Halon Systems' susceptibility to being actuated by lightning flashed from thunderstorms in the vicinity of TMI-2. [The Halon System utilizes ultraviolet (UV) light and rate of pressure rise detectors to trigger the halon discharge. The UV detectors of two zones are oriented such that they may be tripped by flashes outside the Air Intake structure. (Reference LER's 82-18, 82-23, and 83-14 dated June 1, 1982, June 29, 1982, and June 6, 1983, respectively). When any zone was discharged, the AIT Halon System was declared inoperable until the discharged zone was recharged. Typically, this took 10 to 14 days as a result of the

type of Halon System used and its installed arrangement. In order to avoid an extended inoperability and thereby ensure maximum availability of the AIT Halon System protective functions, part of the AIT Halon System was disarmed as previously described during the period of time when "spurious" discharges are most likely, i.e., during thunderstorms. This action was an interim measure until a permanent corrective action was implemented.

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 disarmed zone(s) was/were returned to full functional status as indicated for each occurrence.

Long-Term: Louvers were installed in the openings of the Air Intake structure on August 5, 1983. These louvers should preclude occurrences of the above events. Disarming the AIT Halon System has been discontinued.

V. COMPONENT FAILURE DATA

N/A



GPU Nuclear Corporation

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4410-84-L-0045
Document ID 0017A

October 12, 1984

US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

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 concerning this information, please contact Mr. J. J. Byrne of my staff.

Sincerely,

F. R. Standerfer
Vice President/Director, TMI-2

FRS/RDW/jep

Attachments

cc: Regional Administrator - Office of I & E, Dr. T. E. Murley
Program Director - TMI Program Office, Dr. B. J. Snyder
Deputy Program Director - TMI Program Office, Mr. L. H. Barrett

8410230034 841012
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LER UPDATE PACKAGE

82-038/03L-1
83-007/03X-1
83-020/03X-1
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