

NON-PUBLIC?: N
ACCESSION #: 8701090372
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Three Mile Island Unit 2 PAGE: 1 of 5

DOCKET NUMBER: 05000320

TITLE: Failure To Comply With Technical Specification 3.7.10.2 Due To
Operator Error
EVENT DATE: 12/07/86 LER #: 86-011-00 REPORT DATE: 01/06/87

OPERATING MODE: N POWER LEVEL: 000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION
50.73(a)(2)(i)

LICENSEE CONTACT FOR THIS LER:
NAME: Russell D. Wells, TMI-2 Licensing Engineer TELEPHONE #: 717-948-4388

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: At 0115 hours on Sunday, December 7, 1986, four (4) of 16 deluge system fire detectors for Fuel Handling Building Exhaust Filter AH-F-14A/B were rendered inoperable during the replacement of charcoal filters. An hourly roving firewatch was established in accordance with the action statement of Technical Specification 3.7.10.2. At 1500 hours on December 7, 1986, Control Room personnel secured the firewatch without requiring the proper verification based on a misunderstanding that the detectors had been returned to service. At 2300 hours on December 7, 1986, Control Room personnel realized that the detectors had not been returned to service and re-established the hourly firewatch. Thus, during the period from 1500-2300 hours on December 7, 1986, a condition existed that was prohibited by the Technical Specifications. Therefore, this event is reportable pursuant to 10 CFR 50.73(A)(2)(i)(B). The firewatch remained in effect until 1045 hours on December 11, 1986, at which time the fire detectors were returned to service upon satisfactory completion of TMI-2 Surveillance Procedure 4210-SUR-3811.04. The root cause of this event was operator error. The firewatch documentation sheet will be revised to require operators to document the completion of the applicable surveillance procedure prior to securing a firewatch. Additionally, this event will be discussed with operator personnel to stress proper communication during shift turnover.

(End of Abstract)

I. PLANT OPERATING CONDITIONS BEFORE THE EVENT

The TMI-2 facility is in a long-term cold shutdown state; the defueling evolution is in progress. The reactor decay heat was being removed via loss to ambient. Throughout this event there was no affect on the Reactor Coolant System or the core.

II. STATUS OF STRUCTURES, COMPONENTS, OR SYSTEMS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

N/A

III. EVENT DESCRIPTION

On Sunday, December 7, 1986, the charcoal filters for Fuel Handling Building Exhaust Filter AH-F-14A/B (IEEE Code VG) were replaced in accordance with Unit Work Instruction (UWI) 4220-3830-86-F881. At 0115 hours on December 7, 1986, four (4) of 16 deluge system fire detectors (IEEE Code KP) for AH-F-14A/B were rendered inoperable in accordance with the referenced UWI. Accordingly, an hourly roving firewatch was established at 0200 hours on December 7, 1986, as required by the action statement of Technical Specification 3.7.10.2, "Deluge/Sprinkler Systems." Additionally, a firewatch documentation sheet required by TMI-2 Surveillance Procedure 4211-SUR-3061.01, "Shift and Daily Checks," was initiated for AH-F-14A/B. The firewatch documentation sheet documents the performance of each hourly firewatch by recording the time and name of the individual performing the firewatch.

During the 0700-1500 shift on December 7, 1986, maintenance personnel performed the required hourly firewatch for the AH-F-14A/B. At the en

of the shift (i.e., 1500 hours) maintenance personnel informed the Control Room that they had secured for the day and were turning over the responsibility of performing the firewatch to the Control Room. However, this was misinterpreted by the Control Room as meaning that the fire detectors had been returned to service and that a firewatch was no longer required. In actuality, the fire detectors remained out-of-service. Subsequently, at 1500 hours on December 7, 1986, Control Room personnel secured the firewatch for AH-F-14A/B without proper verification of the operability of the fire detectors. This resulted in a condition prohibited by the Technical Specification, i.e., the fire detectors for AH-F-14A/B out of service without an hourly firewatch. Therefore, this event is reportable

pursuant to 10 CFR 50.73(a)(2)(i)(B).

TEXT: PAGE: 3 of 5

The above condition existed until 2300 hours on December 7, 1986. At that time, Control Room personnel observed that the lifted leads of the fire detectors for AH-F-14A/B had not been returned to service and immediately initiated an hourly roving firewatch. The hourly firewatch remained in effect until 1045 hours on Thursday, December 11, 1986. Then, Control Room personnel secured the firewatch upon proper verification that the fire detectors had been returned to service; i.e., satisfactory performance of TMI-2 Surveillance Procedure 4210-SUR-3811.04, "Fire System Deluge/Sprinkler System Functional Test."

IV. ROOT CAUSE OF THE EVENT

The root cause of this event was Control Room personnel error based on the following:

At the completion of the 0700-1500 shift on December 7, 1986, Control Room personnel misinterpreted the status received from Maintenance personnel as meaning that the fire detectors for AH-F-14A/B had been returned to service. In actuality, the detectors were still out of service and the firewatch should have remained in effect.

Control Room personnel did not take the proper actions to verify the condition of the fire detectors prior to securing the firewatch. Before returning any Technical Specifications system/component to service, the applicable Recovery Operations Plan Surveillance Procedure is required to be performed in order to verify the operability of the Technical Specification system/component. This is in accordance with Recovery Operations Plan Section 4.0.1 which states that, "The Surveillance Requirements shall be performed to demonstrate compliance with the OPERABILITY requirements of the Limiting Condition for Operations and in accordance with the Recovery Operations Plan...". In this event, performance of the applicable surveillance procedure, i.e., 4210-SUR-3811.04, prior to securing the firewatch would have alerted the Control Room personnel that the fire detectors for AH-F-14A/B had not been returned to service.

V. CORRECTIVE ACTIONS

Short-Term - The hourly firewatch for AH-F-14A/B was re-established at

2300 hours on December 7, 1986. The hourly firewatch remained in effect until 1045 hours on December 11, 1986, at which time the firewatch was secured upon satisfactory completion of the required surveillance procedure.

TEXT: PAGE: 4 of 5

Long-Term - In order to minimize the potential for similar misinterpretations, the firewatch documentation sheet will be revised to require Control Room personnel to identify the applicable surveillance procedure that was performed in order to verify the operability of the required Technical Specification system/component prior to securing a firewatch. Additionally, this event will be discussed with operator personnel to stress proper communication between maintenance and operations personnel during shift turnover.

VI. COMPONENT FAILURE DATA

N/A

VII. AUTOMATIC OR MANUALLY INITIATED SAFETY SYSTEM RESPONSES

N/A

VIII. ASSESSMENT OF THE SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The Fuel Handling Building Exhaust Filter, AH-F-14A/B, is located on the 328' elevation of the Auxiliary Building. It is located in fire area FA-009 and the design basis fire postulated in this area is addressed in the Revision 1 update to the GPU Nuclear Fire Hazard Analysis. The Safe Shutdown Analysis for this area states:

"Since all redundant safety related equipment located within this fire area is sufficiently separated, and since the combustibles within the area are limited to localized areas, it is concluded that at least one train of every required safety related system will be available to place the plant in a safe shutdown condition, and automatic fire detection and manual fire suppression systems are available to prevent a fire from damaging redundant safety systems."

Manual fire fighting equipment is available in the immediate vicinity. Rapid fire brigade response would have been available should a fire have started within the filter housing.

During this event, the deluge system for AH-F-14A/B was isolated by a single manually operated valve, as permitted by the Technical Specifications, in order to prevent inadvertent actuation of the deluge system. Of 16 thermal detectors for AH-F-14A/B, only four (4) detectors were required to be disconnected while replacing the charcoal filter units. Thus, if a fire had started in the local area during this event, 75% of the fire detectors were available,

TEXT: PAGE: 5 of 5

i.e., 12 of 16 detectors, to provide alarms and alert operators to open the manual isolated valve and permit filter deluge.

Based on the above evaluation, it has been concluded that this event did not jeopardize the health and safety of the public.

ATTACHMENT # 1 TO ANO # 8701090372 PAGE: 1 of 1

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January 6, 1987

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
Licensee Event Report 86-11

Attached is Licensee Event Report 86-11 concerning a failure to comply with the action statement of Technical Specification 3.7.10.2 on December 7, 1986.

This event is considered reportable pursuant to Title 10 of the Code of Federal Regulations, Section 50.73(a)(2)(i)(B).

Sincerely,

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

FRS/RDW/eml

Attachments

cc: Regional Administrator - Office of I & E, Dr. T. E. Murley
Director - TMI-2 Cleanup Project Directorate, Dr. W. D. Travers

GPU Nuclear Corporation is a subsidiary of the General Public Utilities Corporation

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