

NON-PUBLIC?: N

ACCESSION #: 8704060474
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Three Mile Island Unit 2 PAGE: 1 of 4

DOCKET NUMBER: 05000320

TITLE: Failure To Comply With Technical Specification Action Statement For An Inoperable Air Temperature Delta T Recorder Due To An Inadequate Surveillance Frequency
EVENT DATE: 02/28/87 LER #: 87-004-00 REPORT DATE: 03/31/87

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: Christopher J. Dell, Licensing Technical Analyst
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COMPONENT FAILURE DESCRIPTION:
CAUSE: B SYSTEM: IS COMPONENT: TR MANUFACTURER: E330
REPORTABLE TO NPRDS: No

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: On February 15, 1987, at 1200 hours, the Air Temperature Delta T recorder in the Unit 2 Control Room became inoperable. Technical Specification (Tech. Spec.) 3.3.3.4 requires the meteorological instrumentation of Recovery Operations Plan (ROP) Table 4.3-5 to be operable. ROP Table 4.3-5 requires the operability of the Air Temperature Delta T channel to be verified on a daily basis. The action statement for Tech. Spec. 3.3.3.4 requires inoperable meteorological instrumentation to be restored to operable status within eight (8) hours. However, for an inoperable Air Temperature Delta T recorder, TMI-2 Procedure 4211-SUR-3061.01, "Shift and Daily Checks," permits the use of the Air Temperature Delta T recorder in the Unit 1 Control Room. In accordance with the surveillance procedure, a Unit 2 Control Room Operator (CRO) contacted the Unit 1 Control Room on February 15, 1987, at 1200 hours to verify the operability of the Unit 1 recorder. This action was to be performed on a daily basis until the Unit 2 recorder was returned to service. On March 1, 1987, at 0135 hours, a Unit 2 CRO contacted the Unit 1 Control Room to verify the operability of the

Unit 1 recorder and was notified that the Unit 1 recorder was inoperable as of February 28, 1987, at 0700 hours. The inoperability of the Unit 1 recorder should have placed Unit 2 into the action statement of Tech. Spec. LCO 3.3.3.4 but the Unit 2 Control Room was not aware of the condition. At the time of discovery of this condition, 0135 hours on March 1, 1987, the action statement timeclock had already expired (i.e., timeclock expired at 1500 hours on February 28, 1987). The root cause of this event was an inadequate surveillance frequency for ensuring compliance with the Tech. Spec. action statement. The Unit 2 recorder was repaired and returned to service at 0700 hours on March 1, 1987. As a corrective action, the Unit 2 CRO's "Reading Log" has been revised to require shiftly monitoring of meteorological instruments.

(End of Abstract)

TEXT: PAGE: 2 of 4

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

Air Temperature Delta T Indicator in the Unit 2 Control Room

III. EVENT DESCRIPTION

On February 15, 1987, at 1200 hours, the Air Temperature Delta T recorder (IEEE Code-TR) in the Unit 2 Control Room became inoperable. TMI-2 Technical Specification (Tech. Spec.) Limiting Condition for Operation (LCO) 3.3.3.4 requires the meteorological monitoring instrumentation channels (IEEE Code IS) of Recovery Operations Plan (ROP) Table 4.3-5 to be operable. ROP Table 4.3-5 requires the operability of the Air Temperature Delta T channel to be verified on a daily basis. The action statement for Tech. Spec. LCO 3.3.3.4 requires an inoperable meteorological monitoring channel to be restored to operable status within eight (8) hours. However, for an inoperable Air Temperature Delta T recorder, TMI-2 Surveillance Procedure 4211-SUR-3061.01, "Shift and Daily Checks," Revision 2, Enclosure 1 permits the use of the Air Temperature Delta T recorder in the Unit 1 Control Room to satisfy the Tech. Spec. LCO

requirement. The Unit 1 recorder provides readout from a different sensing device at the TMI meteorological tower. In accordance with the surveillance procedure, a Unit 2 Control Room Operator (CRO) contacted the Unit 1 Control Room on February 15, 1987, at 1200 hours to verify the operability of the Unit 1 Air Temperature Delta T recorder. This action was to be performed on a daily basis per Surveillance Procedure 4211-SUR-3061.01 until the Unit 2 recorder was returned to service.

On March 1, 1987, at 0135 hours, a Unit 2 CRO contacted the Unit 1 Control Room to verify the operability of the Unit 1 Air Temperature Delta T recorder. At this time, the Unit 2 CRO was notified that the Unit 1 recorder had become inoperable on February 28, 1987, at 0700 hours. The inoperability of the Unit 1 Air Temperature Delta T recorder should have placed Unit 2 into the action statement of Tech. Spec. LCO 3.3.3.4 (i.e., an 8-hour timeclock for restoring operability) but the Unit 2 Control Room was not aware of the condition. At the time of discovery of this condition, 0135 hours on March 1, 1987, the action statement timeclock had already expired (i.e., timeclock expired at 1500 hours on February 28, 1987).

TEXT: PAGE: 3 of 4

This condition represented a non-compliance with Tech. Spec. LCO 3.3.3.4. Therefore, it is reportable per 10 CFR 50.73(a)(2)(i)(B) due to a condition prohibited by the Plant's Tech. Specs.

The date of this event is February 28, 1987, the date the Tech. Spec. LCO action statement expired. This condition was not discovered until March 1, 1987; therefore, the report due date is March 31, 1987 (i.e., 30 days after the event was discovered).

IV. ROOT CAUSE OF THE EVENT

The root cause of this event was an inadequate surveillance frequency for ensuring compliance with the Tech. Spec. LCO action statement. As mentioned previously, the action statement for Tech. Spec. LCO 3.3.3.4 has an 8-hour timeclock and the surveillance frequency for ensuring operability is once per 24 hours. Generally, a Tech. Spec. action timeclock starts upon detection of an inoperable condition. However, for equipment that provides evidence of failure times, the Tech. Spec. action statement timeclock starts at the moment the equipment becomes inoperable. Therefore, considering the action statement timeclock (8 hours), surveillance frequency (24 hours), and the ability of the instrument to provide the time when inoperability occurred, it was possible for the recorder to be inoperable and to exceed the Tech. Spec. LCO action statement timeclock prior to being

identified.

V. CORRECTIVE ACTIONS

Immediate - The Unit 2 Air Temperature Delta T recorder was repaired and returned to service at 0700 hours on March 1, 1987.

Long Term

The Unit 2 CRO's "Reading Log" has been revised to require shiftly monitoring of the Unit 2 meteorological instruments or the Unit 1 meteorological instruments if they are being used.

The Unit 2 Tech. Specs. will be reviewed to determine if other similar situations are possible. This review will address the relationships between surveillance intervals, Tech. Spec. action statement timeclocks, and the ability of the equipment to provide evidence of failure times.

The feasibility of using the Unit 2 Control Room Tektronix 4054 computer to provide temperature data during periods of recorder inoperability will be investigated.

TEXT: PAGE: 4 of 4

VI. COMPONENT FAILURE DATA

Component: Air Temperature Delta T Recorder
Instrument No. AH-YMTR-1923
Esterline Angus Multipoint Recorder
Model E1124E
Failure Mode: Defective power supply

VII. AUTOMATIC OR MANUALLY INITIATED SAFETY SYTEM RESPONSES

N/A

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

The basis for the operability of the meteorological instrumentation is to ensure sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental releases of radioactive materials to the atmosphere. The Air Temperature Delta T recorder in the Unit 2 Control Room provides an immediate readout for the temperature sensor at the station

meteorological tower. The temperature sensor is also linked directly to an Environmental Controls computer and a stripchart recorder at the meteorological tower. In the event of an actual routine or accidental release, the required temperature data would be pulled directly from the Environmental Controls computer. Therefore, sufficient meteorological data is still available for estimating radiation doses from radiological releases when the Control Room recorder is inoperable. It is noteworthy that during the period when both the Unit 1 and Unit 2 recorders were inoperable (i.e., February 28, 1987, at 0700 hours to March 1, 1987, at 0700 hours), the temperature data records were lost from the Environmental Controls computer during the period of 1800 hours on February 27, 1987, to 0100 hours on March 1, 1987, due to a computer program error. The lost temperature data was subsequently obtained from the stripchart recorder at the meteorological tower. During this event, no routine or accidental releases from the plant occurred; therefore, this event did not present an undue risk to the health and safety of the public.

ATTACHMENT # 1 TO ANO # 8704060474 PAGE: 1 of 1

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March 31, 1987

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Dear Sirs:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73

Docket No. 50-320
Licensee Event Report 87-04

Attached is Licensee Event Report 87-04 concerning the inoperability of the Unit 2 Air Temperature Delta T recorder.

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

Sincerely,

/s/
for F. R. Standerfer
Director, TMI-2

FRS/CJD/eml

Attachment

cc: Regional Administrator - Region 1, 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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