

NON-PUBLIC?: N
ACCESSION #: 8711100496
LICENSEE EVENT REPORT (LER)

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

DOCKET NUMBER: 05000320

TITLE: Failure to Properly Surveil the EPICOR II Ventilation System Radiation Monitor

EVENT DATE: 07/15/87 LER #: 87-010-00 REPORT DATE: 11/04/87

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 #: 717-948-8693

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: On July 15, 1987, EPICOR II Ventilation System Radiation Monitor (ALC-RMI-18) was replaced with an Eberline PING 2A type monitor. This modification resulted in the sample flowrate monitor being changed from a photohelic type monitor to a rotameter and pressure gauge combination. Table 2.1-3b of the Appendix B Technical Specifications (Tech. Specs.) requires the sample flowrate monitor to be calibrated semi-annually. These surveillances had been performed previously in accordance with Surveillance Procedure 4221-SUR-3526.01. However, the engineering change and implementing documentation did not specify the performance of this procedure as part of the criteria for placing the replacement monitor in service. The failure to do so resulted in ALC-RMI-18 being in an inoperable condition, per the Tech. Spec., and should have required compliance with Action Statement 36 of Table 2.1-3a. On October 6, 1987, during the preparation of a procedure change to 4221-SUR-3526.01, the Safety Review Group (SRG) was consulted and identified the above condition. Compliance with the above referenced Action Statement was achieved. On October 7, 1987, this event was determined to be reportable due to the failure to recognize and comply with the action statement upon the installation of the replacement monitor. This event is reportable per 10 CFR 50.73(a)(2)(i)(B) due to a condition prohibited by the Plant's Tech. Specs. The sample flowrate monitor was surveilled, determined to be within calibrated limits, and restored to operable status on October 9, 1987. The Cognizant Engineer and Responsible Technical Reviewer (RTR) for this event have been counseled. This event also will be discussed

with all the Cognizant Engineers, RTRs, and SRG. The surveillance procedures for the EPICOR II monitor will be reviewed and revised, as necessary, to ensure compliance with the Tech. Specs. This LER is similar in nature to LER 86-07.

(End of Abstract)

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I. PLANT OPERATING CONDITIONS BEFORE THE EVENT

The TMI-2 facility was in a long-term cold shutdown state; the defueling evolution was 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 July 15, 1987, the EPICOR II Ventilation System Radiation Monitor (ALC-RMI-18) was replaced. The previous monitor was a Nuclear Measurement Corporation (NMC) monitor which contained a photohelic type sample flowrate monitor (ALC-FI-18). The replacement monitor is an Eberline PING 2A monitor which is similar to other TMI-2 environmental monitors (e.g., HPR-219). The replacement monitor contains an internally installed rotameter and pressure gauge which serves as the sample flow rate monitor (IEEE 803A CODE FI).

TMI-2 Appendix B Technical Specifications (Tech. Specs.) Table 2.1-3b, "Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance Requirements," requires a semi-annual channel calibration and channel functional test of the EPICOR II Sample Flowrate Monitor. These surveillances had been previously performed in accordance with 4221-SUR-3526.01, "EPICOR II Ventilation System Radiation Monitor Sample Flowrate Monitor Calibration." However, the Tech. Spec. surveillance of the sample flowrate monitor was not specified in either the engineering change or implementing documentation for the replacement monitor. The engineering change and implementing documentation only required that Surveillance Procedure 4221-SUR-3661.14, "Radiation Monitoring System Calibration (Eberline),"

be performed. This procedure is performed on a once per 18 months basis for the Noble Gas Activity Monitor and does not address the sample flowrate monitor.

The surveillances of the sample flowrate monitor, pursuant to Appendix B Tech. Specs. Table 2.1-3b, should have been performed prior to placing the replacement monitor in service. The failure to do so resulted in ALC-RMI-18 being in an inoperable condition, per the Appendix B Tech. Specs., and should have required compliance with Action Statement 36 of Table 2.1-3a which states: "With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flowrate is estimated at least once per 4 hours." It is noteworthy that the sample flowrate monitor was eventually determined to be within calibrated limits.

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On or about September 30, 1987, during preparation for the regularly scheduled performance of 4221-SUR-3526.01, Maintenance personnel determined that this procedure had not been revised to reflect the new sample flowrate monitor (i.e., the rotameter and the pressure gauge), and a change to this procedure was initiated. On October 6, 1987, during preparation of this procedure change, the Safety Review Group (SRG) was consulted and identified the above condition (i.e., the failure to surveil the replacement sample flowrate monitor prior to placing it in service), an Incident Event Report was initiated, the Control Room was notified, and Action Statement 36 of Appendix B Tech. Spec. Table 2.1-3a was entered. On October 7, 1987, as a result of a discussion of this event between SRG and TMI-2 Licensing, it was determined that a condition prohibited by the Plant's Tech. Specs. existed due to the failure to recognize and comply with the above referenced action statement upon the installation of the replacement EPICOR II Ventilation System Radiation Monitor. Therefore, this event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

The replacement sample flowrate monitor was surveilled per the Appendix B Tech. Specs. and determined to be within calibrated limits. The monitor was restored to operable status at 2200 hours on October 9, 1987.

This event is similar in nature to LER 86-07 which also addressed the failure to comply with the action statement of the EPICOR II Ventilation System Radiation Monitor.

The event date of this report is July 15, 1987, (i.e., the date the

replacement sample flowrate monitor was placed in service). The discovery date of this event is October 6, 1987, when the event was recognized by SRG. For purposes of reportability, the 30-day timeclock starts upon the discovery date; therefore, the due date of this LER is November 5, 1987 (i.e., 30-days from October 6, 1987).

IV. ROOT CAUSE OF THE EVENT

The root cause of this event was personnel error. Specifically, the Cognizant Engineer and the Responsible Technical Reviewer (RTR) for the engineering change and implementing documentation failed to specify the requirement to surveil the sample flowrate monitor as part of the criteria for the replacement EPICOR II Ventilation System Radiation Monitor. Instead, the engineering change and implementing documentation specified only the requirement to perform 4221-SUR-3661.14 which does not address the sample flowrate monitor.

Furthermore, the departments who reviewed and concurred on the engineering change and implementing documentation, including the independent safety review performed by SRG, failed to identify that the requirement to surveil the sample flowrate monitor was not specified.

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V. CORRECTIVE ACTIONS

Immediate

Upon discovery of this event on October 6, 1987, the Control Room was notified and compliance with Action Statement 36 of Table 2.1-3a of the Appendix B Tech. Specs. was achieved.

The replacement sample flowrate monitor was surveilled per the Appendix B Tech. Specs. and restored to operable status at 2200 hours on October 9, 1987.

Long-Term

The Cognizant Engineer and RTR involved with this event have been counseled. Additionally, the report of this event will be distributed to all Cognizant Engineers, RTRs, and SRG members with emphasis on the root cause and its ramifications.

The Tech. Spec. surveillance procedures associated with the EPICOR II Ventilation System Radiation Monitor are currently being reviewed and revised, as necessary, to ensure they comply with the

capabilities of the replacement monitor (i.e., the Eberline PING 2A).

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 sample flowrate monitor for the EPICOR II Ventilation System Radiation Monitor (ALC-FI-18) measures the flow through ALC-RMI-18 and provides a proportional indication of the flow through the EPICOR II Vent Stack.

Table 2.1-3b of the Appendix B Tech. Specs. requires a channel check of the sample flowrate monitor on a daily basis which is performed via Surveillance Procedure 4211-SUR-3061.01, "Shift and Daily Checks." The channel check involves the qualitative assessment of channel behavior during operation by observation. Though the sample flowrate monitor was inoperable per the requirements of the Appendix B Tech. Specs., it was in fact observed to be operating on daily basis.

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Following the discovery of this event, the replacement sample flowrate monitor was calibrated with test equipment traceable to the National Bureau of Standards. The monitor was determined to be within acceptable limits without any adjustment. Thus, it can be reasonably concluded that the replacement sample flowrate monitor performed its design function during the time frame of this event (i.e., July 16, 1987 - October 6, 1987) and that the event had no adverse affects on the health and safety of the public.

ATTACHMENT # 1 TO ANO # 8711100496 PAGE: 1 of 1

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November 4, 1987
4410-87-L-0163/0241P

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 87-10

Attached is Licensee Event Report 87-10 concerning the inoperability of the EPICOR II Ventilation Radiation Monitor. This event was discovered on October 6, 1987.

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
Director, TMI-2

RDW/eml

Attachment

cc: Regional Administrator, Region 1 - W. T. Russell
Director, TMI-2 Cleanup Project Directorate - Dr. W. D. Travers

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

*** END OF DOCUMENT ***
