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NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

190429

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Three Mile Island Unit 2

DOCKET NUMBER (2)
0 5 0 0 0 3 2 0 1 OF 0 4

TITLE (4)
Operation of the Reactor Building Purge System outside bounds of Tech Spec 3.6.1.1

EVENT DATE (5)
MONTH DAY YEAR
0 5 1 1 8 4

LER NUMBER (6)
YEAR SEQUENTIAL NUMBER REVISION NUMBER
8 4 - 0 0 7 - 0 0 0

REPORT DATE (7)
MONTH DAY YEAR
0 5 2 2 8 4

OTHER FACILITIES INVOLVED (8)
FACILITY NAMES DOCKET NUMBER(S)
0 5 0 0 0

OPERATING MODE (9)
N

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

| | | | |
|-------------------|------------------|----------------------|--|
| 20.402(b) | 20.406(c) | 50.73(a)(2)(iv) | 73.71(b) |
| 20.406(a)(1)(i) | 50.38(e)(1) | 50.73(a)(2)(v) | 73.71(c) |
| 20.406(a)(1)(ii) | 50.38(e)(2) | 50.73(a)(2)(vii) | OTHER (Specify in Abstract below and in Text, NRC Form 366A) |
| 20.406(a)(1)(iii) | 50.73(a)(2)(i) | 50.73(a)(2)(viii)(A) | |
| 20.406(a)(1)(iv) | 50.73(a)(2)(ii) | 50.73(a)(2)(viii)(B) | |
| 20.406(a)(1)(v) | 50.73(a)(2)(iii) | 50.73(a)(2)(x) | |

LICENSEE CONTACT FOR THIS LER (12)
NAME: Steven D. Chaplin, TMI-2 Licensing Engineer
TELEPHONE NUMBER: 7 1 7 9 4 8 8 4 6 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPROS | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPROS |
|-------|--------|-----------|---------------|---------------------|-------|--------|-----------|--------------|---------------------|
| X | VA | CD MP | B 2 3 7 | N | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)
YES (If yes, complete EXPECTED SUBMISSION DATE) NO X
EXPECTED SUBMISSION DATE (15)
MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On May 25, 1984, a condition considered reportable pursuant to 10 CFR 50.73 was determined to exist. At 0230 hours on May 11, 1984, during performance of Surveillance Procedure 4333-SAL, "Fire System Detector Instrument Functional Test", Valve AH-V-4A failed to close. Valve AH-V-4A is a pneumatically controlled (air opened/spring closed) containment isolation valve in the Reactor Building (RB) Purge/Ventilation System (IEEE Code - VA). Due to a misinterpretation of the Technical Specifications, the "A" train of the RB Purge System, including AH-V-4A, was subsequently operated almost continuously until 0920 hours on May 19, 1984, when AH-V-4A was removed from service for maintenance. Operation of this train after determining AH-V-4A would not close was in violation of Technical Specification 3.6.1.1 requirements and is, therefore, reportable pursuant to 10 CFR 50.73(a)(2)(i).

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 8 4 | 0 7 | 0 0 | 0 2 | OF | 0 4 |

TEXT (If more space is required, use additional NRC Form 366A's) (17)

I. PLANT OPERATING CONDITIONS BEFORE THE EVENT

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

The Reactor Building Purge Ventilation System "A" Train was operating with Containment Isolation Valves AH-V-3A and AH-V-4A open pursuant to Operating Procedure 2104-4.91, "Reactor Building Purge Using the Modified Purge System".

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 May 25, 1984, a condition considered reportable pursuant to 10 CFR 50.73 was determined to exist. At 0230 hours on May 11, 1984, during performance of Surveillance Procedure 4333-SAL, "Fire System Detector Instrument Functional Test", Valve AH-V-4A failed to close. Valve AH-V-4A is a pneumatically controlled (air opened/spring closed) Containment Isolation Valve in the Reactor Building (RB) Purge/Ventilation System (IEEE Code - VA). Due to a misinterpretation of the Technical Specifications, the "A" Train of the RB Purge System, including AH-V-4A, was subsequently operated almost continuously until 0920 hours on May 19, 1984, when AH-V-4A was removed from service for maintenance. Operation of this train, after determining AH-V-4A would not close, was in violation of Technical Specification 3.6.1.1 requirements and is, therefore, reportable pursuant to 10 CFR 50.73(a)(2)(i).

The continued use of the "A" RB Purge Train was a result of misinterpretation of Technical Specification 3.6.1.1. Technical Specification 3.6.1.1 requires that for each containment penetration two (2) isolation valves be maintained operable and closed unless allowed open pursuant to an approved procedure. It also requires that with one valve open or inoperable, at least one (1) de-activated automatic valve is secured in the isolation position.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

The misinterpretation was a result of the following rationale:

- 1) AH-V-4A was functional in its normal operating configuration (i.e., open),
- 2) an approved operating procedure allowed/required AH-V-4A to be open during operation of the "A" Purge Train, and
- 3) the capability existed, and was implemented, to satisfy the Technical Specification Action Statement when the "A" Train was not operating by closing and de-energizing the second Containment Isolation Valve, AH-V-3A (i.e., when AH-V-4A would be required to close).

However, the Technical Specification language permitting valves to be open per approved procedures does not permit the utilization of an inoperable isolation valve.

Accordingly, when valve AH-V-4A would not fully close, the valve inside containment, AH-V-3A, should have been closed and de-activated in accordance with the Technical Specification Action Statement 3.6.1.1(a) and not utilized until AH-V-4A was repaired.

IV. CORRECTIVE ACTIONS PLANNED

At 0920 hours on May 19, 1984, the "A" RB Purge System Train was shut down to facilitate maintenance on AH-V-4A. Valve AH-V-3A (inside containment) was de-activated in the closed position, thus the Action Statement of Technical Specification 3.6.1.1(a) was complied with as of this time. Containment purge was maintained by activation of the "B" RB Purge System Train at 1330 hours on May 19, 1984. The "B" Train will continue to be utilized until AH-V-4A is repaired.

To prevent future misinterpretation of Technical Specification 3.6.1.1, appropriate licensee personnel will review this incident and, in particular, the correct interpretation of this specification. This action will be completed by June 29, 1984.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

V. COMPONENT FAILURE DATA

Valve AH-V-4A failed to close due to a failed closure spring in the valve controller. The controller is a Bettis Corporation Robot Arm Actuator, Model T-516-SR-3 installed on a 36 inch butterfly valve manufactured by the Henry Pratt Company.

VI. AUTOMATIC OR MANUALLY INITIATED SAFETY SYSTEM RESPONSES

N/A

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

Throughout the event, AH-V-4A was in a controlled status. No uncontrolled or adverse condition existed. This event had no effect on the health or safety of the public.



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June 22, 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
Licensee Event Report 84-07

Attached please find Licensee Event Report 84-07 concerning the operation of the Reactor Building Purge System outside the bounds required by Technical Specification 3.6.1.1 on May 11, 1984.

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

Sincerely,

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

BKK/SDC/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

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