

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) McGuire Nuclear Station - Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 6 9 1	PAGE (3) 1 OF 0 4
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TITLE (4)
Inoperable Gaseous Activity Monitor (LEMF-39L) Due to a Defective Procedure

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																																																																																			
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)																																																																																	
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LICENSEE CONTACT FOR THIS LER (12)

NAME Julio G. Torre, Jr. Engineer - Licensing	TELEPHONE NUMBER AREA CODE: 7 1 0 1 4 3 1 7 1 3 1 - 1 8 1 0 1 2 6
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On June 4, 1986, at 0030, during periodic testing of gaseous activity monitor LEMF-39L, it was discovered that the trip 2 logic (high-high activity alarm) on LEMF-39L would not isolate the containment purge (VP) system. The inability of LEMF-39L to isolate the VP system violates Technical Specification 3.3.3.9 which requires LEMF-39L to be operable at all times since LEMF-39L sends a signal to the Solid State Protection System (SSPS) to energize a relay which in turn isolates the VP system. On June 3, 1986, both trains of SSPS were taken out of service and no automatic isolation capacity of the VP system existed from the time both trains of the SSPS were taken out of service until the VP system was taken out of service for periodic testing on June 3, at 2155. However, Unit 1 was in compliance with the action statement of T.S. 3.3.3.9 since the VP was isolated to perform testing on LEMF-39L. On June 4, at 0220, both trains of SSPS were returned to service and the VP system was also returned to service shortly thereafter.

Unit 1 was in Mode 6, refueling, at the time of this event.

This event has been attributed to a defective procedure since the appropriate procedure failed to state the SSPS receives a signal from LEMF-39L to isolate the VP system. A management deficiency also contributed to this event. The appropriate procedure has been modified in order to provide for automatic isolation capability of the VP system with both trains of SSPS inoperable. The health and safety of the public were not affected by this incident.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) McGuire Nuclear Station - Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 6 9 8 6	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		- 0 1 0	- 0 0		0 2	OF 0 4

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

On June 4, 1986, at 0030, during periodic testing of gaseous activity monitor LEMF-39L, it was discovered that the trip 2 logic (high-high activity alarm) on LEMF-39L would not isolate the containment purge (EIIS:VL) (VP) system. The inability of LEMF-39L to isolate the VP system violates Technical Specification 3.3.3.9 which requires LEMF-39L to be operable at all times since LEMF-39L sends a signal to the Solid State Protection System (EIIS:JC) (SSPS) to energize a relay which in turn isolates the VP system.

On June 3, 1986, both trains of SSPS were taken out of service and no automatic isolation capacity of the VP system existed from the time both trains of the SSPS were taken out of service until the VP system was taken out of service for periodic testing on June 3, at 2155. However, Unit 1 was in compliance with the Action Statement of Technical Specification 3.3.3.9 since the VP was isolated to perform testing on LEMF-39L. On June 4, at 0220, both trains of SSPS were returned to service and the VP system was also returned to service shortly thereafter.

Unit 1 was in Mode 6, refueling, at the time of this event.

BACKGROUND:

The VP system provides the capability for purging the containment atmosphere to the environment through the unit vent. The VP system has the capacity to sufficiently reduce the concentration of airborne fission products in the various portions of containment within acceptable limits for personnel access for inspection, maintenance, and testing as required. LEMF-38 is a radiation monitor used to monitor radioactive particulate in the VP system. LEMF-39L is used to monitor gaseous activity and LEMF-40 monitors iodine activity in the VP system. On high activity, LEMF-38, LEMF-39L, or LEMF-40 will initiate termination of release from the VP system.

The purpose of the SSPS is to supply reactor and component trip signals and initiate engineered safeguard features. Two redundant trains, identical in function, provide equipment and personnel protection during normal operating and emergency conditions.

DESCRIPTION OF EVENT:

On June 3, 1986, both trains of the SSPS were removed from service for outage related work. Both trains of SSPS are allowed to be out of service by T.S. 3.3.2. On June 4, Duke Power station personnel started performing monthly periodic testing on LEMF-39L. The VP system was isolated to perform the test. During the testing, it was discovered that LEMF-39L would not isolate the VP system as required by T.S. 3.3.3.9. During the investigation of this event it was discovered that LEMF-39L sends a signal to the SSPS energizing relay K615. This relay in turn isolates the VP system. Since the VP system was isolated to perform testing on LEMF-39L, Unit 1 was in compliance with the action statement of T.S. 3.3.3.9. On June 4, at 0215, Duke Power personnel notified the NRC of the subject incident.

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FACILITY NAME (1) McGuire Nuclear Station - Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 6 9	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 6	- 0 1 0	- 0 0	0 3	OF 0 4

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

At 0220, on June 4, both trains of the SSPS were returned to service. At 0430, LEMF-39L was returned to service, and at 0630, the VP system was returned to service.

CONCLUSION:

During past refueling outages, it has been standard practice to remove both trains of SSPS from service at the same time for testing. Technical Specification 3.3.2 requires automatic actuation capability of containment purge and exhaust valves in Modes 1 through 4, but no requirements are given for Modes 5, 6, and no mode status. Technical Specification 3.3.3.9 requires LEMF-39L to be operable at all times in order to provide for the isolation of the VP system as appropriate. Duke Power personnel believe there is a possibility that McGuire might have violated Technical Specification 3.3.3.9 for an undetermined period of time during past refueling outages.

The Reactor Protection System Response Time Test procedure is used to remove and restore the SSPS from service. This procedure was written in compliance with Technical Specification 3.3.2 which states that both trains of SSPS can be inoperable during Modes 5, 6, and in no mode. The responsible personnel were unaware that LEMF-39L sent a signal to the SSPS to isolate the VP system and did not realize that LEMF-39L required one train of SSPS to be operable in order to energize relay K615.

A review of past events indicates no other similar incident. However, due to the past standard practice to remove both trains of SSPS from service during outages, this is considered a recurring event.

This event was attributed to a defective procedure due to the Reactor Protection System Response Time Test procedure not indicating that the SSPS receives a signal from LEMF-39L to isolate the VP system. It has also been determined that a management deficiency contributed to this event since the responsible personnel failed to realize that Technical Specifications 3.3.2 and 3.3.3.9 have different requirements imposed on the automatic isolation capability of the VP system.

There were no personnel injuries, radiation overexposures, or releases of radioactive materials resulting from this incident.

CORRECTIVE ACTIONS:

Subsequent:

- 1) Both trains of SSPS were returned to service.

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		8 6	0 1 0	0 0	0 4	OF	0 4

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

- 2) Appropriate changes were incorporated into the Reactor Protection System Response Time Test procedure to install and remove necessary wiring and hardware in the SSPS when removing both trains from service. These changes will allow both trains of SSPS to be inoperable and still have relay K615 energized as appropriate, enabling 1EMF-39L to automatically isolate the VP system.

Planned:

- 1) Duke Power personnel will develop a proposed change to Technical Specification 3.3.2 stating that automatic isolation capability of the VP system from 1EMF-39L is also required in Modes 5, 6, and in no mode.
- 2) The requirements of Technical Specification 3.3.3.9 will be incorporated to the Limiting Conditions for Operation Monitor program. The changes to this program will also reflect the procedure changes to the Reactor Protection System Response Time Test procedure.

SAFETY ANALYSIS:

If an incident had occurred in containment during the time 1EMF-39L was inoperable and the unit was in Mode 5, 6, or no mode, there should have been no significant release of radioactive gas. Even though the EMFs would not automatically secure the VP system they would still alarm in the control room and the operators would have to respond as needed. 1EMF-39L would also have actuated the containment evacuation alarm.

On the receipt of a high level alarm on 1EMF-38, 1EMF-39L, or 1EMF-40, control room operators would first try to reset the EMF to verify if the alarm is valid. The operators would also contact the appropriate Health Physics personnel and inform them of the trip 2 logic alarm. If the alarm does not clear the operator would take appropriate action to secure the VP system. Health Physics personnel would also request the control room operator to secure the VP system when they were notified of the alarm.

1EMF-35, 1EMF-36, and 1EMF-37, which monitor the unit vent, would also alarm on high activity. Again, the control room operators and Health Physics personnel would respond to isolate the source of the high activity. There is no automatic isolation of the unit vent by an EMF. 1EMF-35 or 37 will stop auxiliary building unfiltered exhaust fans and radwaste air handling units. 1EMF-36 will isolate waste gas.

There have been no incidents inside containment on either unit at McGuire which would have required 1EMF-39L or 2EMF-39L to initiate isolation of the VP system.

The health and safety of the public were not affected by this incident.

DUKE POWER COMPANY
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CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

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July 8, 1986

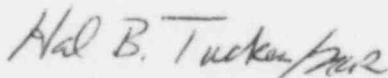
Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: McGuire Nuclear Station - Unit 1
Docket Nos. 50-369
LER 369-86-10

Gentlemen:

Pursuant to 10CFR 50.73 Section (a)(2)(v), attached is Licensee Event Report 369-86-10 concerning an Inoperable Gaseous Activity Monitor (1EMF-39L) Due to a Defective procedure. Submittal of the enclosed Licensee Event Report was delayed up to July 11, 1986, per my letter dated July 2, 1986. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



Hal B. Tucker

JGT/13/jgm

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11