

August 8, 1994

U. S. Nuclear Regulatory Commission
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ULNRC-3054

Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 94-003-00
FAILURE TO PROPERLY PERFORM SURVEILLANCE OF
TECH SPEC 4.3.3.6 ON THE CONTAINMENT AREA
RADIATION-HIGH RANGE MONITORING INDICATORS DUE
TO LACK OF KNOWLEDGE OF A COMMITMENT**

The enclosed Licensee Event Report is submitted pursuant to 10CFR 50.73(a)(2)(i) concerning Failure to Properly Perform Surveillance of Tech Spec 4.3.3.6 on the Containment Area Radiation-High Range Monitoring Indicators Due to Lack of Knowledge of a Commitment.

A handwritten signature in cursive script, appearing to read "J. D. Blosser".

for J. D. Blosser
Manager, Callaway Plant

^{TPS}
JDB/TPS/MAH/lrj

Enclosure

cc: Distribution attached

9408150208 940808
PDR ADDCK 05000483
S PDR

Handwritten initials "IE28" with a vertical line through them.

cc distribution for ULNRC-3054

Mr. J. B. Martin
Regional Administrator
U. S. Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Mr. L. Raynard Wharton (2 copies)
Licensing Project Manager
U. S. Nuclear Regulatory Commission
OWFN - Mail Stop 13E21
Washington, D. C. 20555

Manager, Electric Department
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

Records Center
Institute of Nuclear Power Operations
700 Galleria Parkway
Atlanta, GA 30339

Mr. Steve Wideman
Supervisor, Licensing
Wolf Creek Nuclear Operating Corporation
P. O. Box 411
Burlington, KS 66839

Mr. M. J. Farber
Chief, Reactor Projects Section III A
U. S. Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Mr. Thomas A. Baxter
Shaw, Pittman, Potts & Trowbridge
2300 N. Street N.W.
Washington, D.C. 20037

NRC Senior Resident Inspector

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Callaway Plant Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 8 3					PAGE (3) 1 OF 0 5		
TITLE (4) Failure to Properly Perform Surveillance of Tech Spec 4.3.3.6 on the Containment Area Radiation-High Range Monitoring Indicators Due to Lack of Knowledge of a Commitment																	
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)							
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV. NO.	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)				
0 7	0 8	9 4	9 4	0 0 3	0 0	0 8	0 8	9 4					0 5 0 0 0				
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check one or more of the following) (1.1)															
1		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)			
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(a)(1)				50.73(a)(2)(vi)				73.71(c)			
9 4		20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)			
		20.405(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(viii)(A)							
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)							
		20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)							
LICENSEE CONTACT FOR THIS LER (12)																	
NAME T. P. Sharkey, Supervising Engineer, Site Licensing										TELEPHONE NUMBER AREA CODE: 3 1 4 6 7 6 - 8 3 3 6							
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																	
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC								
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR			
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO																	

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

On 6/2/94, a utility Quality Assurance (QA) engineer's surveillance of radiation monitors found that a 1989 utility engineering evaluation conflicted with the Final Safety Analysis Report. Utility engineers' concluded the evaluation was in error with respect to the Chapter 7A requirements detailing the plant's response to Regulatory Guide 1.97, Post Accident Monitoring System (PAMS) instrumentation.

Regulatory Guide 1.97 requires safety-related qualified equipment to be used for the Containment Area Radiation-High Range monitors and indicators. The evaluation mistakenly concluded the monitor channel was considered operable with it's safety-related indicator (RM-23) module inoperable provided the channel was monitored on the parallel non-safety-related RM-11 display.

The "PAMS CHANNEL CHECK" surveillance procedure was reviewed by the QA engineer. At first, his review determined that a concern did not exist since it listed both RM-11 and RM-23. On 7/8/94, after the QA engineer questioned a licensed Reactor Operator, it was found that the operators were using only the RM-11. It was determined that the CHANNEL CHECK requirements of Tech. Spec. 4.3.3.6 had not been met. The plant was in Mode 1 at 94% reactor power.

Since receipt of the initial license on 6/11/84, utility personnel have not been aware that the safety-related display indication for Containment Area Radiation High-Range was only provided by the RM-23's and did not include the RM-11 display. The engineering evaluation, work control database, and operation procedures have been revised to show the required use of the RM-23. Licensed personnel will review this event.

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TEXT (If more space is required, use additional NRC Form 365A's)(17)

BASIS FOR REPORTABILITY:

This event is reportable per 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications (T/S). The T/S surveillance 4.3.3.6 CHANNEL CHECK of the Containment Area Radiation-High Range monitor indicators, GT-RIC-59/60⁽¹⁾, was not properly performed since receipt of the Operating License (OL) on 6/11/84.

PLANT CONDITION AT TIME OF EVENT:

Mode 1 - Power Operations; 94% Reactor Power

Reactor Coolant System (RCS): Temperature (average) - 587 degrees F
Pressure - 2230 psig

DESCRIPTION OF EVENT:

On 6/2/94, a utility Quality Assurance (QA) engineer's surveillance of radiation monitors indicated that a utility engineering evaluation (Request for Resolution #04924A) conflicted with the Final Safety Analysis Report (FSAR) Chapter 7.5, "Safety-Related Display Instrumentation". He documented the concern on the plant's corrective action system. On 6/23/94, in response to the corrective action concern, utility engineers' concluded the evaluation was in error with respect to the Chapter 7A requirements detailing the plant's response to Regulatory Guide 1.97, Post Accident Monitoring System (PAMS) instrumentation.

Regulatory Guide 1.97 Design and Qualification Criteria for Category 1 Instrumentation requires safety-related equipment. It also specifies the Containment Area Radiation-High Range monitors as Category 1 instrumentation. The FSAR requires these safety-related (Category 1) indicators be operable as part of the channels for monitoring Containment Area Radiation-High Range levels to detect and assess significant releases. The indicators (RM-23's) for these Category 1 channels are located on panel SP067⁽²⁾ which is behind the Main Control Board in the Control Room. Panel SP067 receives safety-related power. The engineering evaluation concluded in 1989 that the affected radiation monitor channel was considered operable with it's RM-23 module inoperable provided the channel was monitored on the parallel non-safety-related powered RM-11 display (See Figure I). This evaluation concluded the local microprocessor (RM-80)⁽³⁾ actually generates alarm conditions and engineered safety actuations, and all the functions performed by the RM-23 can be performed by the RM-11.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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			0 3 OF 0 5

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

After receiving Engineering's response on 6/23/94, the surveillance procedure OSP-SH-00001, "PAMS CHANNEL CHECK", was reviewed by the utility QA engineer. At first, his review determined that a concern did not exist for GT-RIC-59/60 since it listed the RM-11 and RM-23 indication locations as the indicators to perform a CHANNEL CHECK. On 7/8/94, after the QA engineer questioned a licensed Reactor Operator to find out how the channel check was performed, it was found that the operators were using only the RM-11. Utility engineers confirmed the RM-11 could not alarm for every conceivable RM-23 failure. Therefore, the event was determined to be reportable.

ROOT CAUSE:

Since initial license in 1984, utility personnel were not aware that the safety-related display instrumentation for containment high range radiation was only provided by the RM-23's on panel SP067 behind the Main Control Board and that this did not include the RM-11 monitor/printer. This is evidenced by the following contributing factors:

- A. Surveillance procedure OSP-SH-00001, item 16 has shown the required meter indication as either "RM-11" or "RM-11, RM-23". It has not specified just the RM-23 indication.
- B. The originally licensed T/S 3/4.3.3.6 Tables 3.3-10 and 4.3-7 did not specify GT-RIC-59/60 (i.e., the RM-23 indicator tag numbers) for containment high range radiation channels to reflect the FSAR commitments to Regulatory Guide 1.97.
- C. The 1989 engineering evaluation allowed the use of the RM-11 for an RM-23 failure condition. The responsible utility engineer did not thoroughly review the commitments to Regulatory Guide 1.97 in the FSAR.

CORRECTIVE ACTIONS:

1. Operations' Department procedures have been revised to show the required use of the RM-23 to satisfy the CHANNEL CHECK.
2. Licensed operators will review this event.
3. The engineer who performed the engineering evaluation (RFR 04924A) in 1989 is now aware of the requirements in Regulatory Guide 1.97 for the Containment Area Radiation-High Range indicators. He has revised the evaluation to show that the RM-11 cannot be used to replace the RM-23.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

4. A review of other radiation monitoring systems determined that this event was unique to the Containment Area Radiation-High Range monitors because of specific regulatory requirements and plant configuration.
5. The work control database has been modified to incorporate the information relative to this event.

SAFETY SIGNIFICANCE:

Control Room licensed operators have used the RM-11 indicators for readings. These indicators have additional functionality above that of the RM-23s. They can provide trending and printouts for the various monitors. The primary difference between the two indicators is the qualification per Regulatory Guide 1.97. The RM-23 is a digital indication, whereas CHANNEL CHECKS have historically been used for analog circuits. If an accident had occurred coincident with an RM-23 failure, the RM-23 module could be changed out within a few minutes. Both the RM-11 and RM-23 panel indications are part of an 18 month T/S 4.3.3.6 loop calibration surveillance which has been completed successfully since 1984. This 18 month surveillance satisfied the monthly CHANNEL CHECK requirement in the month performed. The Containment Area Radiation- High Range channels would have operated as required by T/S and other regulatory commitments. This event is an administrative failure to visually check redundant indications on a monthly basis. Most credible failures of the RM-23 would have been identified by the RM-11 console. There was no threat to the public health or safety.

PREVIOUS OCCURRENCES:

None.

FOOTNOTES:

The system and component codes listed below are from IEEE Standard 805-1984 and 803A-1984, respectively.

- (1) System - IP, Component - RI
- (2) System - EK, Component - PL
- (3) System - IP, Component - DCC

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 368A's)(17)

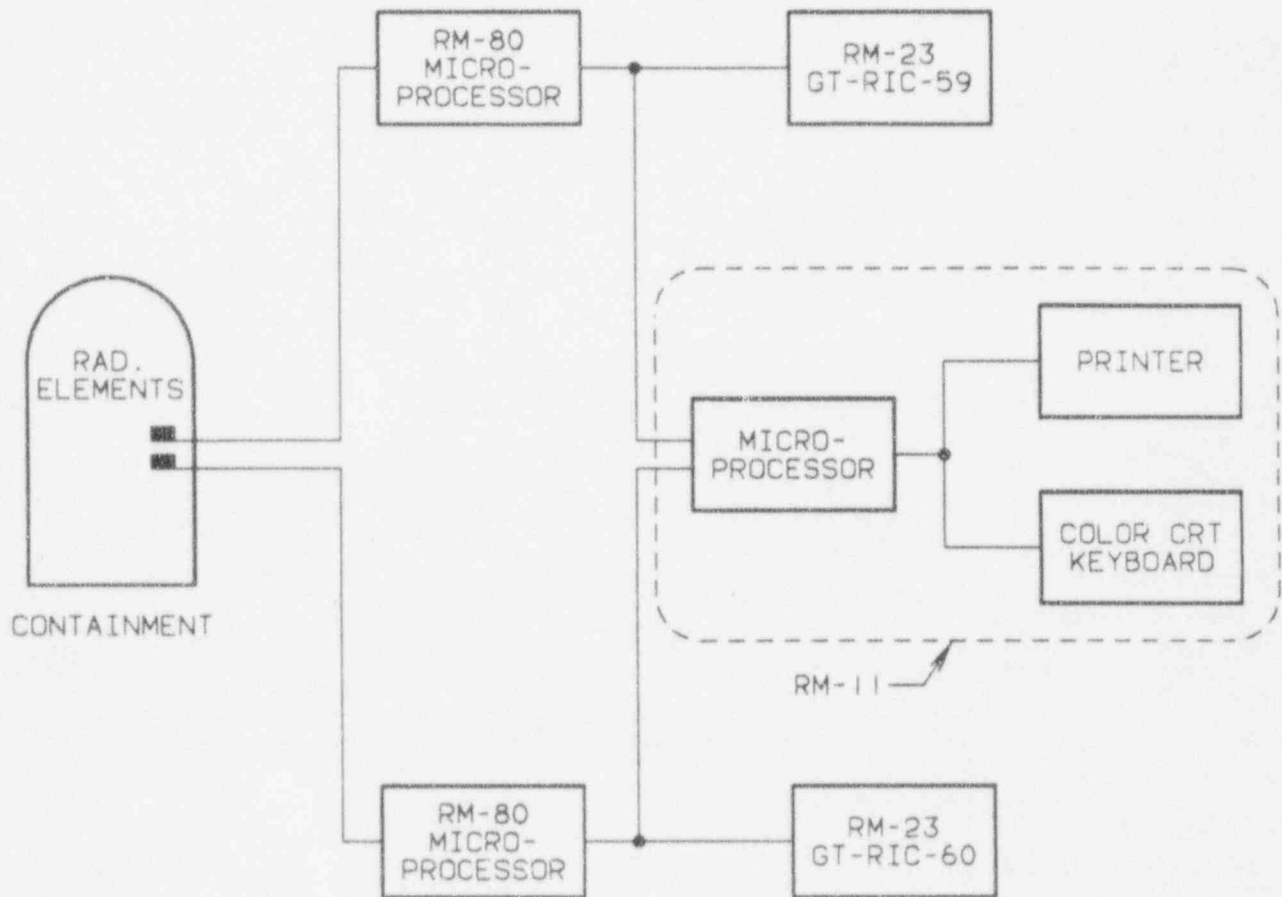


FIGURE I