UNION ELECTRIC

Callaway Plant

November 20, 1989

U. S. Nuclear Regulatory Commission
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Washington, DC 20555

ULNRC-2111

Gentlemen:

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 89-012-00
LEAKAGE PAST LIQUID RADWASTE DISCHARGE
MONITOR TANK INLET ISOLATION VALVE INVALIDATED
THE BATCH SAMPLING PERFORMED PRIOR TO DISCHARGE

The enclosed Licensee Event Report is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) concerning operation of the Callaway Plant with a condition prohibited by the plant's Technical Specifications. This condition resulted when it was discovered that leakage had occurred past the liquid radwaste Discharge Monitor Tank 'A' inlet isolation valve and invalidated the batch sampling performed prior to discharge.

J. D. Blosser
Manager, Callaway Plant

TPS/LAM:jlh

Enclosure

cc: Distribution attached

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Callaway Plant Unit 1	0 5 0 0 0 4 8 3	1 OF 0 4

TITLE (4) Leakage Past Liquid Radwaste Discharge Monitor Tank Inlet Isolation Valve Invalidated The Batch Sampling Performed Prior To Discharge

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)
1 0	1 9	8 9	8 9	—	0 1 2	— 0 0	1 1	2 0	8 9		0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		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	TELEPHONE NUMBER
J. R. Polchow, Superintendent Chemistry/Radwaste	AREA CODE 3 1 4 — 6 7 6 - 8 2 7 2

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

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

On 10/19/89 at 1300, it was determined that leakage past liquid radwaste (LRW) Discharge Monitor Tank (DMT) 'A' inlet isolation valve, HB-FV-0886, invalidated the Technical Specification (T/S) required batch sample performed prior to discharge. The plant was in Mode 1 - Power Operations, at 100 percent reactor power.

On 7/20/89, a Radwaste (RW) technician heard minor flow noise indicating that HB-FV-0886 may have been leaking past its valve seat. He initiated a work request condition tag. On 9/26/89, further leakage past HB-FV-0866 was observed. The valve was replaced on 9/29/89. After reviewing discharge documents and operating logs, the total unsampled volume of LRW discharged to the environment was found to be approximately 1665 gallons.

HB-FV-0886 was leaking by due to corrosion of the valve. The RW foreman or Shift Supervisor (SS) had not realized the potential T/S compliance concern when they reviewed the work request. The manual isolation valve upstream of HB-FV-0886 was not required to be used by plant procedure. Procedures have been revised to require the use of manual isolation valves to provide double inlet isolation to the DMTs for discharge. This event will be discussed with all RW personnel. The failure to identify this event as a T/S compliance concern by the SS and the RW foreman was determined to be an isolated event.

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

Basis for Reportability

On 10/19/89 at 1300, it was determined that leakage past liquid radwaste (LRW) Discharge Monitor Tank (DMT) 'A'(1) inlet isolation valve, HB-FV-0886,(2) invalidated the required sample performed prior to discharge. This was determined to be reportable as a condition prohibited by Technical Specification (T/S) 4.11.1.1.1 Table 4.11-1 Notation (2) which states: "A batch release is the discharge of liquid wastes of a discrete volume. Prior to sampling for analyses, each batch shall be isolated, and then thoroughly mixed by a method described in the ODCM to assure representative sampling." This event is being reported per 10CFR50.73(a)(2)(i)(B).

Plant Conditions at Time of Event

Mode 1 - Power Operations; 100 Percent Reactor Power

Description of Events

At approximately 0500 on 7/20/89, a Radwaste (RW) technician heard minor flow noise indicating that the DMT 'A' inlet isolation valve HB-FV-0886 may have been leaking past its valve seat. The RW technician initiated a work request (WR) condition tag.

On 9/26/89, it was discovered by another RW technician that the level in DMT 'A' was increasing and the level in DMT 'B' was decreasing without any addition to or discharge from either tank. The RW technician who discovered the problem with HB-FV-0886 on 7/20/89 recalled the WR on the valve and verified the condition tag was still hanging. The condition tag sticker had not been placed on the control board in the RW Control Room. A review of the RW logs on 9/27/89 indicated that the level in DMT 'A' had increased one percent (1000 gallons) in the previous five hours with HB-FV-0886 closed. The upstream manual isolation valve HB-V-0884(3) was shut and tank level was monitored for five hours. No further leakage was observed. Therefore, HB-FV-0886 was determined to have been leaking past its valve seat on this occasion. The condition was identified as a potential T/S 4.11.1.1.1 concern. On 9/27/89, a corrective action document was initiated to determine reportability.

A review was initiated to determine if any unsampled volume of LRW discharged to the environment. Discharge documents and operating logs (from date of initial discovery, 7/20/89, to the date the valve was replaced, 9/29/89) were reviewed. Discharge volumes were counted if when immediately following a DMT 'A' discharge an increase in level in the DMT 'A' was noted. If DMT 'A' level did increase, it was assumed that HB-FV-0886 was leaking past the valve seat the entire time of the DMT 'A' discharge. The logs also show cases after 7/20/89 where there was no DMT 'A' level increase following its discharge. This review concluded that leakage occurred on four out of 27 DMT 'A' discharges. The total unsampled volume of LRW discharged to the environment was found to be approximately 1665 gallons.

*U.S. GPO: 1988-520-589:00070

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

Root Cause

The inlet isolation valve, HB-FV-0886, to DMT 'A' was intermittently leaking. The valve failure was due to corrosion caused by the wide pH ranges of the feed water coming into the DMT.

Contributing factors:

1) The manual isolation valve HB-V-0884 upstream of HB-FV-0886 was not used or required to be used by plant procedures which would have provided double inlet valve isolation.

2) The utility non-licensed RW foreman or licensed Shift Supervisor (SS) did not realize the potential T/S compliance concern. Therefore, the WR was not assigned a higher priority.

Corrective Actions

1) HB-FV-0886 was replaced on 9/29/89. A WR was initiated to evaluate the similar inlet isolation valve to DMT 'B', HB-FV-0887.

2) On 9/27/89, a change to procedure RTN-HB-01000, Operation of the Liquid Radwaste Discharge Monitor Tanks, was written which added the operation of manual isolation valves HB-V-0879, HB-V-0880, and HB-V-0884 to isolate DMT 'A' for recirculation, sample and discharge.

3) The Radwaste Department has revised procedures HTP-ZZ-02006, Liquid Radwaste Release Permit (Batch), RTN-HB-01000, Operation of the Liquid Radwaste Discharge Monitor Tanks, RTN-HB-00500, Waste Monitor Tank Operation, and RTN-HF-00300, Operation of Secondary Liquid Waste Monitor Tanks, to provide double isolation where possible to ensure DMT isolation for discharge.

4) This event will be discussed with all RW Personnel stressing the need to properly document and follow up on problems of this nature to ensure timely repairs.

5) The failure to identify this event as a T/S compliance concern by the SS and the RW foreman was determined to be an isolated occurrence. The SS and RW foreman will receive a copy of this report for their information.

Safety Significance

DMT 'B' sample analysis was representative of the leakage past HB-FV-0886 into DMT 'A'. DMT 'B' had been discharged within the T/S radioactive effluent limits. Radiation monitor HB-RE-0018 was operable during this time and would have alarmed and isolated any release of radioactive effluent to the environment. Therefore, this event did not endanger the public health and safety.

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

Previous Occurrences

None.

Footnotes

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

(1) System - WD, Component - TK
(2) System - WD, Component - ISV
(3) System - WD, Component - ISV