NRC Form 366
(9-83)

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

LICENSEE EVENT REPORT (LER)

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TITLE (4)
Inadequate Procedures Cause Two Cases of Missed Samples That Were Required To Compensate For Inoperable Effluent Radiation Monitors

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)
									Browns Ferry Unit 2	0 5 0 0 0 2 6 0
0 1 2 2	8	8	8 8	0 1 0	0 0	0 3	0 4	8 8	Browns Ferry Unit 3	0 5 0 0 0 2 9 6

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Earl D. Nave, Engineer, Plant Operations Review Staff	2 0 5 7 2 9 - 2 5 3 7

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 January 22, 1988 at 2100 hours, and on January 29, 1988, at 1500 hours, with all three units defueled, two similar events involving missed compensatory sampling for inoperable effluent radiation monitors occurred. The cause of both events was inadequate procedures.

The first event occurred when compensatory sampling of the raw cooling water (RCW) discharge from a reactor building closed cooling water heat exchanger was stopped. The heat exchanger was removed from service but the RCW flow was not isolated.

The second event was declaring the off-gas posttreatment monitors operable without completing all surveillance requirements. Compensatory sampling was stopped.

The immediate corrective action for both events was the resumption of compensatory sampling.

The corrective action for both events is the revision of applicable procedures.

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

Description of Event

Two similar events involving missed compensatory sampling for out of service radiation monitors occurred due to deficient procedures. Browns Ferry units 1, 2, and 3 were defueled during these events. Units 1 and 3 were effected by these events.

On January 22, 1988, at 2100 hours, it was discovered that compensatory sampling required by technical specifications (TSs) 3.2.D.2-3, due to the unit 1 raw cooling water (RCW) effluent radiation monitor (EIIS code IL) inoperability, had been erroneously discontinued. On January 22, 1988, at 1035 hours, the unit 1 reactor building closed cooling water (RBCCW) heat exchanger (EIIS code CC) 1B was removed from service by securing RBCCW flow to it. The chemistry lab was notified per operations instruction (OI) that the heat exchanger had been removed from service. It was assumed by chemistry lab personnel that the RCW (EIIS code KG) had also been secured. Compensatory sampling was stopped with the last sample taken at 0800 hours. Between the hours of 0800 and 2000, RCW flow to the heat exchanger had not been secured. On January 22, 1988, RCW discharge continued without compensatory sampling.

On January 28, 1988, at 1150 hours, the unit 3 off-gas isolation valve was opened per the charcoal adsorber layup procedure. The chemistry lab was notified and initiated compensatory sampling due to inoperable off-gas posttreatment monitors. At 1320 hours, the off-gas posttreatment system calibration test was complete and the monitor was declared operable. The chemistry lab was notified and stopped sampling. On January 29, 1988, at 1500 hours, it was determined that the system calibration test did not include the automatic isolation of this pathway as required by TS 4.2.K.1-6a. The off-gas posttreatment monitors were declared inoperable and the chemistry lab was notified and sampling was resumed. The duration of this event was 27 hours, 54 minutes.

Cause of Event

The first event was caused by a communication problem between the chemistry lab shift supervisor and the unit operator. This problem was due to an inadequate OI. The OI for the RBCCW systems requires that the chemistry lab be notified when a RBCCW heat exchanger is put in or removed from service. The chemistry lab was notified by operations that the 1B RBCCW heat exchanger was removed from service per the OI, but the RCW was not isolated. The chemistry lab stopped taking samples on the 1B heat exchanger. The 1A RBCCW heat exchanger remained in service and sampling was performed as required.

The second event was also caused by a deficient procedure. The scope of the off-gas posttreatment radiation monitoring system calibration surveillance specifies the surveillances required to meet TS for these instruments. The

instrument technicians performing the calibration and the unit 3 operator, based on this instruction, assumed all testing requirements were met and declared the monitors operable. It was discovered the next day during the review of the surveillance by the cognizant engineer that the scope of the surveillance was in error and a test required by TS 4.2.K.1-6a was omitted.

Corrective Action

For both events, the immediate corrective action was to resume the required compensatory sampling.

The corrective action for the first event is to revise the OI for the RBCCW system to ensure that the notification to the chemistry lab when an RBCCW heat exchanger is placed in or removed from service clearly includes the status of RCW flow through that heat exchanger.

The corrective action for the second event will be a correction to the scope of the surveillance instruction to ensure that all testing required to meet TS requirements for operability are specified.

Analysis of Event

There is nothing to indicate that any radiation release limits were exceeded for either event.

For the first event, the RCW samples taken prior to the event at 0800 hours from the outlet of RBCCW heat exchanger 1B and after the event at 2000 hours were below detectable radiation levels. The 1A RBCCW heat exchanger was in service and compensatory samples were taken at its outlet during this time. All radiation measurements were below detectable levels. The radiation level of RCW samples has been consistently below detectable levels in the past. Since RBCCW flow was isolated from the 1B heat exchanger, there would have been no increased consequences to this event had unit 1 been operating at full power.

For the second event, all functions of the off-gas posttreatment radiation monitors with the exception of the isolation function had been verified operable when the monitors were declared operable. The operator would have received control room annunciation if the release had exceeded the TS setpoint for the monitor. With the unit shutdown and the off-gas system out of service, the only potential source of radioactive release was residuals from the charcoal beds. Based on the system configuration and the fact that the operator received no alarms there was no potential for releases in excess of TS limits during this event.

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

Previous Similar Events - BFRO-50-259/85010

Commitments - Revise the OI for RBCCW system to ensure that the chemistry lab is notified specifically of RCW status when an RBCCW heat exchanger is removed from service.

Revise the scope of the calibration and functional test surveillances for the off-gas posttreatment radiation monitors to list all surveillance testing required to meet operability requirements.

TENNESSEE VALLEY AUTHORITY

Browns Ferry Nuclear Plant
Post Office Box 2000
Decatur, Alabama 35602

MAR 07 1988

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

Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE REPORT BFRO-50-259/88010

The enclosed report provides details concerning the inadequate procedures causing two cases of missed samples that were required to compensate for inoperable effluent radiation monitors. This report is submitted in accordance with 10 CFR 50.73 (a)(2)(i).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. G. Walker
Plant Manager
Browns Ferry Nuclear Plant

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NRC Resident Inspector, Browns Ferry Nuclear Plant

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