

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Catawba Nuclear Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 1 1 3	PAGE (3) 1 OF 04
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TITLE (4)
Turbine Building Sump/Steam Generator Water Sample Radiation Monitors Inoperable

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)
0	9	23	84	013	0010	2	3	84				0 5 0 0 0
												0 5 0 0 0

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)										
POWER LEVEL (10) 01010	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)							
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)							
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 368A)							
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)								
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(vii)(B)								
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)							TELEPHONE NUMBER				
NAME Roger W. Ouellette, Assistant Engineer-Licensing							AREA CODE 704		3731-7530		

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
<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 September 23, 1984, at 1248 hours while Unit 1 was in Mode 5 (Cold Shutdown), an inability to automatically control the release of radioactive material was discovered. The Radiation Monitor override switch on the Unit 1 Turbine Building Sump Pump Panel was found to be in the RESET position. In the reset position, the Turbine Building Sump Pumps will not shut down on a high radiation signal from the Turbine Building Sump Radiation Monitor (1EMF-31). On July 5, 1984, the Steam Generator Water Sample Radiation Monitor (1EMF-34) was declared inoperable per the Tech Spec Action Items Logbook (TSAIL) and remained inoperable until September 29, 1984. Therefore, with both 1EMF-31 and 1EMF-34 out of service from July 5, 1984 to September 23, 1984, an unmonitored radiological flowpath existed from the shellside of the Steam Generators to the Turbine Building Sump.

Immediately after discovering that the Radiation Monitor override switch was in the RESET position, it was returned to the OFF position which enabled the EMF interlocks. It was also verified that the Turbine Building Sump Pumps' radiation monitor interlock worked properly by simulating a high radiation signal and verifying that the pumps did shut down.

This event is classified as an Administrative/Procedural Deficiency. When Test Procedure TP/1/B/1600/01A (Process Radiation Monitoring Functional Test) was performed on June 25, 1984, the Radiation Monitor Override Switch was placed in the reset position. However, there was no step in the procedure to return the switch to the off position.

This incident is reportable pursuant to 10 CFR 50.73, Section (a)(2)(v)(c).

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
					013	010

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

The Turbine Building Sump Radiation Monitor (1EMF-31) continuously monitors the radioactivity level of liquid effluents in the Turbine Building Sump. This is accomplished by use of the Turbine Building Sump sample pump which recirculates the sump water through 1EMF-31. The three Turbine Building Sump Pumps are normally in automatic operation, starting on high sump level and stopping on low sump level. Discharge of the Turbine Building Sump Pumps signal from 1EMF-31, the Turbine Building Sump Pumps will automatically stop if running and an annunciator in the Control Room will alarm on high radiation regardless of the position of the Radiation Monitor Override switch. Operating Procedure OP/1/B/6500/13 (Turbine Building Sump System) requires manual realignment of the Turbine Building Sump Pumps' discharge path to the Auxiliary Building Floor Drain Tank on a high radiation signal from 1EMF-31. The pumps can be put back into operation as required by placing the Radiation Monitor Override switch in the Reset position. When radiaiton level in the sump is determined to be acceptable, the discharge path is realigned to the Initial Holdup Pond and the Radiation Monitor Override switch is placed in the off position.

The BB System (Steam Generator Blowdown) assists in maintaining Steam Generator shell water chemistry by extracting blowdown from the Steam Generator. This blowdown flow is routed to the BB tank where some of it flashes to steam. The BB tank separates the water and steam phases. The water phase is then pumped out of the BB tank and discharged to either the Turbine Building Sump or the Condenser Hotwell. A portion of the blowdown flow is directed through the Steam Generator Water Sample Radiation Monitor (1EMF-34). On a high radiation signal from 1EMF-34, the following occurs:

- 1) Blowdown Flow Control Valves 1BB-24, 65, 69, 73, 156, 158, 159 close.
- 2) Valve 1BB-27 (BB tank vent to atmosphere) closes.
- 3) Valve 1BB-48 (BB disch to Turbine Building sump) closes.
- 4) An annunciator alarm is received in the control room.

DESCRIPTION OF INCIDENT

On September 23, 1984, at 1248 hours, the Radiation Monitor override switch was found in the RESET position during the performance of a quarterly Analog Functional Test on 1EMF-31. With the switch in the RESET position, the Turbine Building Sump Pumps are prevented from shutting down on a high radiation signal from 1EMF-31. The switch was returned to the OFF position. Also, a high radiation signal was simulated to 1EMF-31 to verify that the Turbine Building Sump Pumps would shut off automatically. The verification was successful. The NRC was notified of the event on September 23, 1984, at 1610 hours.

On June 25, 1984, Test Procedure TP/1/B/1600/01A (Process Radiation Monitoring Functional Test) was performed on 1EMF-31. The Radiation Monitor Override switch was placed in the RESET position, but there was no procedural direction to return the switch to the OFF position. Therefore, 1EMF-31 was found to be inoperable from June 25, 1984 to September 23, 1984.

On July 5, 1984, 1EMF-34 was declared inoperable in the Technical Specification Action Item Log (TSAIL) per Work Request IAE 2333, a work request that had

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

been completed a week earlier. Investigation could not reveal how this happened. However, it had been determined that if an item is listed as inoperable in the TSAIL, whether it technically is or not, it is considered inoperable. Even if 1EMF-34 had not been logged in the TSAIL as inoperable per Work Request 1AE 2333, it was identified in TSAIL as inoperable on three other occasions between August 1, 1984 and September 19, 1984.

Therefore, from July 5, 1984, to September 23, 1984, both 1EMF-34 and 1EMF-31 were inoperable. 10 CFR 50.73, Section (a) (2) (v) (c) was violated, in that a condition existed that resulted in an event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material. This was the case because Steam Generator Blowdown water could have never been radiologically monitored before reaching the Turbine Building sump and ultimately the Initial Holdup Pond.

This incident is classified as an Administrative/Procedural Deficiency. If Test Procedure TP/1/B/6100/01A had required the Radiation Monitor Override Switch on the Turbine Building Sump Pump Panel to be returned to the OFF position, the incident would not have occurred. Also, if Operating Procedure OP/1/B/6500/13 and Operations Management Procedure 1-19 (Round Sheets) had included a check of this switch, it would not have remained in the RESET position for such a long period of time.

CORRECTIVE ACTION

The Radiation Monitor Override Switch was returned to the OFF position. Also, the automatic shutoff of the Turbine Building Sump Pumps on a high radiation signal was verified.

A step was added to OP/1/B/6500/13 to verify the switch in the OFF position before placing the sump pumps in service.

A step will be added to TP/2/B/1600/01A (Unit 2 Process Radiation Monitoring Functional Test) to ensure that the Radiation Monitor Override Switch is returned to the OFF position after testing is complete on 2EMF-31.

A step will be added to the Operations Round Sheets to check the Radiation Monitor Override Switch position for 1EMF-31 periodically.

The adequacy of the immediate corrective action ensured that the radiation monitor interlock with the Turbine Building Sump Pumps functioned as designed. The change to OP/1/B/6500/13 will ensure that the Radiation Monitor Override Switch will be placed in the RESET position prior to the startup of the Turbine Building Sump Pump.

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SAFETY ANALYSIS

Although an unmonitored potentially radioactive flowpath existed from the Steam Generators to the Turbine Building Sump, no personnel injuries or radiation exposures resulted from this incident. Also, it is apparent that no radioactive releases were made because no significant amounts of radiation have been produced since Unit 1 has not achieved initial criticality.

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

March Board
20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 1984

DUKE POWER COMPANY

P.O. BOX 33189
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HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

October 23, 1984

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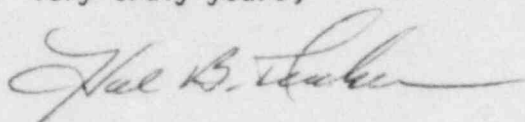
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U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Catawba Nuclear Station, Unit 1
Docket No. 50-413

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a) (1) and (d), attached is Licensee Event Report 413/84-13 concerning turbine building sump/steam generator water sample radiation monitors inoperable. 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

RWO:slb

Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
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Catawba Nuclear Station

American Nuclear Insurers
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