ILLINOIS POWER
CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727-0678, TELEPHONE (217) 935-8881

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2C.220

January 4, 1991

10CFR50.73

Docket No. 50-461

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

Subject: Clinton Power Station - Unit 1
Licensee Event Report No. 90-017-00

Dear Sir:

Please find enclosed Licensee Event Report No. 90-017-00: Residual Heat Removal System Not Bypassed During Performance of Heat Exchanger "B" Room Differential Temperature Channel Calibration Causing an Engineered Safety Feature Actuation. This report is being submitted in accordance with the requirements of 10CFR50.73.

Sincerely yours,

F. A. Spangenberg, III
Manager - Licensing and Safety

JDP/alh

Enclosure

cc: NRC Resident Office
NRC Region III, Regional Administrator
INPO Records Center
Illinois Department of Nuclear Safety
NRC Clinton Licensing Project Manager

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IE22

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)
Clinton Power Station	0 5 0 0 0 4 6 1	1 OF 0 3

TITLE (4) Residual Heat Removal System Not Bypassed During Performance of Heat Exchanger B Room Differential Temperature Channel Calibration Causing an Engineered Safety Feature Actuation

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)
										None	0 5 0 0 0
1 2	0 6	9 0	9 0	-	0 1 7	- 0 0	0 1	0 4	9 1		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)	0 0 0	20.402(b)	20.405(c)	X 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)	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
P. D. Yocum, Director - Plant Operations, Extension 3205	2 1 7 9 3 5 - 8 8 8 1

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 December 6, 1990, the plant was in Operational Condition 5 (REFUELING) with the Residual Heat Removal (RHR) "A" system in service for shutdown cooling. Surveillance testing for the performance of a channel calibration on the RHR Heat Exchanger "B" Room Differential Temperature Channel was in progress. A thermocouple wire was lifted at panel 1H13-P715E causing the RHR Shutdown Cooling Outboard Suction Valve 1E12-F008 and the RHR "A" Return to Containment Pool Shutoff Valve 1E12-F037A to automatically close in response to an isolation signal causing the RHR "A" pump to trip. The lifted lead was relanded and valves 1E12-F008 and 1E12-F037A were repositioned. The RHR "A" system was returned to service within seventeen minutes. The cause of this event is attributed to two procedural implementation errors. The Control Room Operator positioned the Reactor Water Cleanup system (RT) BYPASS switch to the BYPASS position instead of the RHR BYPASS switch. The second error was the failure of the Control & Instrumentation Technician to perform an adequate double verification to ensure correct switch would be positioned. Corrective action consisted of counseling the individuals on procedural compliance.

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

DESCRIPTION OF EVENT

On December 6, 1990, the plant was in Operational Condition 5 (REFUELING) with the Residual Heat Removal [BO] (RHR) "A" system in service for shutdown cooling maintaining the reactor coolant temperature at 80 degrees Fahrenheit at atmospheric pressure. At approximately 0453 hours, Control & Instrumentation Technicians (C&I) obtained approval from the Line Assistant Shift Supervisor (LASS) to perform surveillance test 9432.15, "RHR Heat Exchanger A Room Differential Temperature 1E31-N600A(B) and RHR Heat Exchanger B Room Differential Temperature 1E31-N611A(B) Channel Calibration". The Control Room Operator (CRO) logged the surveillance in the Control Room journal as starting the Reactor Water Cleanup [CE] (RT) system Heat Exchanger [HX] differential temperature [TDC] 1E31-N611A calibration.

At 0455 hours, the CRO verified the RT LOGIC BYPASS switch [HS] was in the NORMAL position. The C&I technician verified the RHR LOGIC BYPASS switch was in the NORMAL position. At 0457 hours, the CRO placed the Division 1 [illegible] LOGIC BYPASS switch in the BYPASS position. The C&I technician verified illumination of the Leak Detection [IJ] (LD) system LOGIC "A" IN BYPASS annunciator [ANN] on panel [PL] 1H13-P601-19A at window 6B while observing the CRO position the switch from a distance. The C&I technician then connected the Digital Voltage Meter [MTR] (DVM) to terminals LC and N on point module 1E31-N611A in panel [PL] 1H13-P632 to verify the multimeter read approximately 120 volts. The CRO was notified by the C&I technician that the field thermocouple wire from the positive terminal 1H13-P715E terminal board 6 terminal 10 (+) would be lifted and a meter module would be removed during performance of the channel [CHA] calibration. At 0508 hours, after double verification by the C&I technicians, the field thermocouple wire from the positive terminal was lifted causing an isolation signal. In the response to this isolation signal, RHR Shutdown Cooling Outboard Suction Valve [V] 1E12-F008 and RHR "A" Return to Containment Pool [BT] Shutoff Valve [SHV] 1E12-F037A automatically closed causing the RHR "A" pump to trip.

At 0512 hours, the C&I technicians relanded the field thermocouple wire. The LASS directed a verification of isolation actuation. Valves 1E12-F008 and 1E12-F037A were verified to reposition as expected. By 0525 hours, the RHR "A" system had been filled and vented and the RHR "A" system was returned to service. The operating loop of shutdown cooling was restored within seventeen (17) minutes.

CAUSE OF EVENT

An insufficient degree of attention to detail was applied by both the licensed Control Room Operator and by the Control and Instrumentation technician resulting in two procedural compliance deficiencies associated with personnel error. The first deficiency was the positioning of the RT

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

BYPASS switch in BYPASS rather than positioning the RHR BYPASS switch in BYPASS. The second deficiency was an inadequately performed double verification by the C&I technician prior to BYPASS switch manipulation.

CORRECTIVE ACTION

The Control Room Operator has recognized his error in operating the wrong LD Logic (RT versus RHR). Additionally, the Control and Instrumentation technician has recognized his error associated with the performance of an inadequate double verification. Each has readily admitted the errors associated with this event and each has been counseled on procedural compliance and the requirements of independent and double verification.

The details of this event were presented to operations shift personnel through the issuance of an Operations Night Order.

C&I technicians will be briefed on the details of this event. This briefing is scheduled to be completed by February 8, 1991.

ANALYSIS OF EVENT

Assessment of the safety consequences and implications of this event indicates that this event was not safety significant. Technical Specification 3.9.11.1 provides allowances for removal of the cooling loop from operation for up to two hours per eight hour period. No reactor coolant temperature increase was observed during this event. RHR "A" was returned to service within seventeen minutes.

This event is reportable under provisions of 10CFR50.73(a)(2)(iv) because of the automatic isolation of containment isolation valves [ISV] 1E12-F008 and 1E12-F037A.

Additional Information

No components failed during this event.

For further information regarding this event, contact P. D. Yocum, Director-Plant Operations, at (217) 935-8881, extension 3205.

LER 87-016-00, discusses spurious isolation caused by lifting the wrong lead after double verification.

LER 89-005-00, discusses a spurious isolation caused by the inaccurate placement of a jumper during surveillance testing.

LER 89-036-00, discusses a spurious isolation caused by the inaccurate connection of testing instrumentation during surveillance testing.