

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <p style="text-align:center;">Clinton Power Station</p>	DOCKET NUMBER (2) <p style="text-align:center;">0 5 0 0 0 4 6 1 1</p>	PAGE (3) <p style="text-align:center;">1 OF 0 5</p>
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TITLE (4) Failure to Accurately Assess the Impact that an Existing System Lineup Had on a Local Leak Rate Test Lineup Results in the Violation of Secondary Containment Integrity

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	
0	3	0	4	8	9	8	9	—	0	1	4	0	0
						0	4	0	0	6	8	9	
												0 5 0 0 0	

OPERATING MODE (9) <p style="text-align:center;">5</p>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
POWER LEVEL (10) <p style="text-align:center;">0 0 0</p>	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)(ii)		50.73(a)(2)(viii)(A)					
	20.405(a)(1)(iv)		50.73(a)(2)(iii)		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 <p style="text-align:center;">D. R. Morris, Director - Plant Operations, Extension 3205</p>	TELEPHONE NUMBER
	AREA CODE
	<p style="text-align:center;">2 1 7 9 3 5 1 - 8 8 8 1</p>

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)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15) MONTH DAY YEAR _____
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

ABSTRACT

On March 6, 1989, during the performance of a local leak rate test (LLRT) on a containment penetration, while core alterations were in progress, test engineers identified a violation of secondary containment integrity. On March 4, 1989, during preparations for the LLRT, the Shift Supervisor (SS) revised the valve lineup for the LLRT to accommodate an existing system lineup and to shut valves to prevent secondary containment bypass leakage paths. The revised valve lineup, however, did not prevent a direct leakage path from the steam tunnel, inside the secondary containment, to the turbine building, outside the secondary containment. Therefore, Technical Specification 3.6.6.1, which requires secondary containment integrity, was violated. The cause of this event is attributed to the failure of the SS to accurately assess the impact that the existing system lineup had on the LLRT lineup and on plant conditions. Corrective actions include counselling the SS on the failure to review the LLRT lineup for direct leakage paths, briefing all operations shift supervisors on this event, training operations personnel on preventing secondary containment bypass and direct leakage paths, and performing an evaluation to determine if LLRT procedures should be revised to identify secondary containment boundaries.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Clinton Power Station	DOCKET NUMBER (2)  0 5 0 0 0 4 6 1 8 9 - 0 1 4 - 0 0 0 2 OF 0 5	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

DESCRIPTION OF EVENT

On March 6, 1989, with core alterations in progress, a vent path from the steam tunnel, inside the secondary containment [BD], to the turbine building [NM], outside the secondary containment, was discovered. This placed the plant in a condition prohibited by Technical Specification 3.6.6.1 and is therefore reportable under the provisions of 10CFR50.73(a)(2)(i)(B). Technical Specification 3.6.6.1 requires secondary containment integrity in Modes 1 (POWER OPERATION), 2 (STARTUP), 3 (HOT SHUTDOWN), when irradiated fuel is being handled in secondary containment, and during core alterations and operations with the potential for draining the reactor vessel.

On January 13, 1989, feedwater (FW) system [SJ] drain valve [V] 1FW033 was danger tagged in the open position to establish a drain path so that work could be performed on a portion of the FW system located outside of secondary containment in the turbine building. Changing the position of a danger tagged valve is prohibited by plant procedures.

On March 4, 1989, the plant was in Mode 5 (REFUELING), at approximately eighty-five degrees Fahrenheit and atmospheric pressure, and the first refueling outage was in progress. Control rod venting, which requires control rod withdrawal, was being performed. Control rods were being withdrawn with the reactor pressure vessel [RPV] head removed and fuel in the vessel therefore, core alterations were in progress and secondary containment integrity was required.

On March 4, 1989, preparations began for a Local Leak Rate Test (LLRT) on the 'B' feedwater line containment penetration [PEN] LMC-10. The boundaries of this LLRT, included a portion of the FW system which extends across the secondary containment boundary between the steam tunnel and the turbine building.

Prior to implementing the valve lineup for the LLRT, the Shift Supervisor (SS) reviewed the valve lineup to ensure that outage work had not created any secondary containment bypass leakage paths. As a result of this review, the SS identified the need to shut valves between the reactor pressure vessel feedwater inlet line and the FW, reactor water cleanup [CE], and residual heat removal [BO] systems so that no secondary containment bypass path would exist. The SS subsequently revised the LLRT valve lineup to require that these valves be shut.

The SS also revised the LLRT lineup to maintain valve 1FW033 in the open position to accommodate the valve lineup that was performed on January 13, 1989 in support of FW system work.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Clinton Power Station	DOCKET NUMBER (2)  0 5 0 0 0 4 6 1 8 9 - 0 1 4 - 0 1 0 0 3	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

On March 4, 1989, the revised LLRT valve lineup was implemented. Implementing this lineup opened a number of vent [VTV] and drain valves to provide a vent path for the LLRT. These valves included drain valves 1B21-F465B and 1B21-F466B.

At 0328 hours on March 6, 1989, test engineers performing the LLRT on penetration 1MC-10 realized that the revised LLRT valve lineup provided a direct leakage path from the steam tunnel, inside the secondary containment, to the turbine building, outside the secondary containment, through valves 1FW033, 1B21-F465B, and 1B21-F466B. Therefore, Technical Specification 3.6.6.1 was violated. The main control room was immediately notified and, in accordance with ACTION 'b' of Technical Specification 3.6.6.1, core alterations were suspended.

At 0354 hours, drain valves 1B21-F465B and 1B21-F466B were closed and secondary containment integrity was restored.

At 0455 hours, core alterations resumed.

No automatic or manually initiated safety system responses were necessary to place the plant in a safe and stable condition. No other equipment or components were inoperable at the start of this event such that their inoperable condition contributed to this event.

CAUSE OF EVENT

The cause of this event is attributed to utility-licensed operator error. The SS failed to accurately assess the impact that the existing FW system lineup had on the LLRT lineup and on plant conditions.

The SS developed a false sense of security when he identified and eliminated the secondary containment bypass leakage paths and as a result, failed to recognize that a direct leakage path was created from secondary containment to the turbine building.

CORRECTIVE ACTIONS

The Shift Supervisor involved in this event was counselled for the failure to review the LLRT lineup for direct leakage paths from secondary containment.

All Operations Shift Supervisors will be briefed on this event. This briefing is scheduled to be complete by April 13, 1989.

Appropriate Operations personnel will be trained on preventing secondary containment bypass and direct leakage paths during system work and testing. This training will be provided during operator requalification training for 1989 and is scheduled to be completed by December 31, 1989.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Clinton Power Station	DOCKET NUMBER (2)  0 5 0 0 0 4 6 1 8 9	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Illinois Power (IP) will evaluate the need for revising LLRT procedures to identify valves which could affect secondary containment integrity, to indicate secondary containment boundaries on LLRT system diagrams, and to change the boundaries of LLRTs where possible to avoid crossing secondary containment boundaries. This evaluation is scheduled to be completed by May 30, 1989.

ANALYSIS OF EVENT

This event is reportable under the provisions of 10CFR50.73(a)(2)(i)(B) due to operation prohibited by the plant's Technical Specifications.

Secondary containment was inoperable and the plant was in a condition prohibited by Technical Specification 3.6.6.1 from sometime on March 4, 1989 until 0328 hours on March 6, 1989.

An assessment of the safety consequences and implications of this event indicates that the event is not considered to be safety significant for existing plant conditions or other plant modes or power levels. This determination is based on the following facts:

- ° Drain valves 1FW033, 1B21-F465B and 1B21-F466B are all three-quarter inch diameter valves. IP has determined that inleakage through a three-quarter inch diameter opening is approximately five cubic feet per minute (cfm) at 0.25 inches of vacuum water gauge.
- ° Review of the test results for the most recent drawdown test (performed in November, 1988) indicates that secondary containment inleakage was 1417 cfm at 0.25 inches of vacuum water gauge.
- ° In accordance with section 6.2 of the Updated Safety Analysis Report, the design maximum allowable inleakage for secondary containment is 1500 cfm at 0.25 inches of vacuum water gauge.
- ° During the period that the direct leakage path from secondary containment existed, secondary containment integrity was demonstrated in accordance with Surveillance Procedure 9000.01, Control Room Surveillance Log, as required by Technical Specification 4.6.6.1.a. This was accomplished by verifying at least once per twenty-four hours that the vacuum within the secondary containment was greater than or equal to 0.25 inches of vacuum water gauge.

No release of radioactive material to the outside environment occurred as a result of this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Clinton Power Station	DOCKET NUMBER (2)  0   5   0   0   0   4   6   1   8   9	LER NUMBER (6)			PAGE (3)					
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER						
		0	1	4	0	0	5	OF	0	5

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

ADDITIONAL INFORMATION

LER 88-016-00 documents a violation of secondary containment integrity caused by the failure of personnel to recognize the location and extent of the repair of a penetration seal.

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



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L45-89(04-06)-LP  
2C.220

ILLINOIS POWER COMPANY



CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

April 6, 1989  
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. 89-014-00

Dear Sir:

Please find enclosed Licensee Event Report No. 89-014-00:  
Failure to Accurately Assess the Impact that an Existing System Lineup  
Had on a Local Leak Rate Test Lineup Results in the Violation of  
Secondary Containment Integrity. This report is being submitted in  
accordance with the requirements of 10CFR50.73.

Sincerely yours,

A handwritten signature in cursive script that reads "D. L. Holtzscher".

D. L. Holtzscher  
Acting Manager -  
Licensing and Safety

RSF/krm

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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11