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 4

TITLE (4) Inoperable Airlock Door System Due to Inadequate Assessment of the Impact of an Airlock Repair During Post Maintenance Testing Evaluation

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 5	0 2	8 8	8 8	0 1 4	0 0	0 5	2 5	8 8	None	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
2	0 1 3	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
R. F. Schaller, Assistant Manager - Plant Operations x3205	AREA CODE 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	
X	N H	A L	C 3 1 0	N							

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)

ABSTRACT

On May 2, 1988, with the plant in Mode 2 (STARTUP), a containment personnel airlock door system was determined to be inoperable because of insufficient post maintenance testing (PMT) to verify the operability of the airlock door system following repair to its outer door equalizing valve. The airlock should have been leak tested, however, only the airlock interlock operation was checked. Following identification of the insufficient PMT, the airlock was leak tested three times. The first two tests identified leaks which were subsequently repaired and the third test identified no unacceptable leaks. This event was caused by a personnel error which resulted from an inadequate assessment of the impact of the airlock repair on the required airlock surveillance tests. The inadequate assessment occurred because the shift supervisor did not know the equalizing valve repair required a leak test. Corrective actions include counselling of the personnel responsible for the inadequate evaluation and performance of an evaluation of airlock reliability.

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

DESCRIPTION OF EVENT

On May 2, 1988, at approximately 1145 hours, with the plant in Mode 2 (STARTUP), at approximately 3% reactor [RCT] power, the elevation 828 containment personnel airlock [AL] door [DR] system [NH] was determined to be inoperable and thus in violation of the plant's Technical Specifications (TS). The TS require all primary containment airlocks to be operable in Mode 1 (POWER OPERATION), Mode 2, and Mode 3 (HOT SHUTDOWN) to maintain primary containment integrity. The airlock was inoperable because of insufficient post maintenance testing (PMT) to verify airlock door system operability following repair of the outer airlock door equalizing valve [V] internals.

Technical Specification 4.6.1.3.b.2 requires that when maintenance has been performed which could affect the capability of the airlock to seal, an overall airlock leakage test must be performed prior to declaring the airlock operable. The only PMT performed to determine operability following the repair of the equalizing valve was a check of the airlock interlock operation. The inoperable airlock condition was identified by the local leak rate test coordinator (LLRTC) during the normal close out review process for maintenance work request (MWR) C46275.

At 1800 hours on April 29, 1988, with the plant in Mode 2, the airlock was declared inoperable because of a broken yoke on the outer door equalizing valve. MWR C46275 was initiated to correct the broken yoke.

The inner airlock door was locked closed at 2010 hours on April 29. As a result of potential environmental qualification problems (not related to this LER), the plant entered Mode 4 (COLD SHUTDOWN) at 2050 hours on April 29.

The airlock door repair began at 0550 hours on April 30 and required disassembly of the equalizing valve. Repair and PMT of the airlock were completed and the airlock was declared operable at 1937 hours on April 30.

On May 2, at 0037 hours, the plant manager approved reactor startup and the plant entered Mode 2. (Technical Specifications require that the airlock be operable when the plant is in Mode 2.)

At 1145 hours on May 2, the LLRTC determined that the required PMT for the work performed in accordance with MWR C46275 should have included an airlock leak rate test. This determination was based on the fact that during the airlock repair, the boundary of the outer airlock door equalizing valve had been breached.

Because of insufficient PMT, Operations declared the airlock inoperable. The airlock was subsequently locked closed and an airlock leak rate test was initiated. At 1600 hours on May 2, the airlock failed the leak rate test because of excessive leakage around the outer door operating shaft seal [SEAL]. This leakage was corrected and on May 3, at 0357 hours the leak rate test was performed a second time. This retest identified a leak through the inner door equalizing valve. The leak was repaired and a successful airlock leak rate test was performed. At 1106 hours on May 3 the airlock was restored to an operable status.

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 THE EVENT

The cause of this event is attributed to personnel error on the part of a utility-licensed operator.

MWR C46275 was delivered to the shift supervisor (SS) for PMT evaluation on April 30 after the airlock repairs had been completed. The SS was aware that the equalizing valve boundary had been breached but did not know if this condition would necessitate the performance of a leak rate test as part of the PMT.

The SS was familiar with the Technical Specification requirements but was not aware that the work performed would invalidate the airlock leak rate surveillance. Therefore, the cause of this event was an inadequate assessment of the impact of the airlock repair on the required airlock surveillance tests.

CORRECTIVE ACTION

The personnel responsible for the inadequate evaluation of the airlock PMT during this event have been counselled on the requirements for PMT of the airlock system.

Illinois Power is in the process of evaluating the reliability of the containment airlocks by temporarily increasing the frequency of the leakage test. After each test is completed, the test results are evaluated to determine any possible degradation of airlock components.

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

Investigation of this event also identified a deficiency in the airlock leakage test procedure. This procedure deficiency had the potential for identifying and repairing airlock boundary leakage prior to performing the actual leakage test. Surveillance procedure 9861.02, LOCAL LEAK RATE TESTING REQUIREMENTS, has been revised to correct this procedure deficiency.

ANALYSIS OF EVENT

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

The elevation 828 containment personnel airlock was inoperable from 1800 hours on April 29, 1988 until 1106 hours on May 3, 1988, however, the doors were not required to be operable by Technical Specifications when the plant was in Mode 4 during this period.

An assessment of the safety consequences and implications of this event indicates that this event was not safety significant for existing plant conditions or other plant modes or power levels. Illinois Power has determined that although a leakage path could have existed between the primary containment and the outside atmosphere, the total secondary containment bypass leakage, including the potential leak resulting from this event, would not have caused radiation exposures in excess of 10CFR100 limitations under accident conditions with the reactor operating at 102% of rated power.

ADDITIONAL INFORMATION

The airlock is model number CL01MC1MC03W manufactured by Chicago Bridge and Iron Company.

LER 87-039-00 discussed a personnel failure to declare a containment isolation valve [ISV] inoperable when maintenance was performed on the valve. As a result of this failure, the valve was returned to service without the PMT required to demonstrate valve operability.

For further information regarding this event, contact R. F. Schaller, Assistant Manager - Plant Operations at (217) 935-8881, extension 3205.

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L45-88(05-25)-LP
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ILLINOIS POWER COMPANY

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

10CFR50.73
May 25, 1988

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. 88-014-00

Dear Sir:

Please find enclosed Licensee Event Report No. 88-014-00: Inoperable Airlock Door System Due to Inadequate Assessment of the Impact of an Airlock Repair During Post Maintenance Testing Evaluation. This report is being submitted in accordance with the requirements of 10CFR50.73.

Sincerely yours,

D. L. Holtzscher for

F. A. Spangenberg, III
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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