

LICENSEE EVENT REPORT (LER)

Facility Name (1) Dresden Nuclear Power Station, Unit 2 Docket Number (2) 0 | 5 | 0 | 0 | 0 | 2 | 3 | 7 Page (3) 1 | of | 0 | 4

Title (4) Failure of Secondary Containment Leak Test Due to Excessive In-Leakage

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	1	8	8	7	0	2	8	0	0	1	0	1	5	8	7	Dresden Unit 3	0 5 0 0 0 2 4 9
											N/A	0 5 0 0 0						

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

POWER LEVEL (10) 0 9 3	<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 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)	<input type="checkbox"/> Other (Specify in Abstract below and in Text)
	<input checked="" type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" 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)(viii)(B)	
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name: Anthony Anandappa Technical Staff Engineer (Ext. 529) TELEPHONE NUMBER: AREA CODE 8 | 1 | 5 9 | 4 | 2 | - | 2 | 9 | 2 | 0

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	G	S	E	A	L			Y

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X | NO

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 0230 hours on September 18, 1987, an orderly unit shutdown of Units 2 and 3 was initiated due to inability to maintain 0.25 inches of water negative differential pressure in the Reactor Buildings with respect to the outside atmosphere during performance of a Secondary Containment Leak Rate Test (SCLRT). Unit 2 and Unit 3 were operating at 93% and 59% rated thermal power, respectively. Although the SCLRT is normally only performed at each refueling outage in accordance with Technical Specification (T.S) 4.7.C.1.c, this test was performed due to an Operator observation that while running the standby gas treatment system on September 16, 1987, the control room differential pressure indication did not show 0.25 inches of water negative. A thorough walkdown of the secondary containment was initiated to identify sources of air in-leakage. The SCLRT was then performed in order to determine secondary containment operability in the as-found condition. During performance of the SCLRT, a differential pressure of approximately 0.2 inches of water was observed, which did not meet the T.S. 4.7.C.1.c operability criteria of 0.25 inches of water. Although the ambient wind conditions were in excess of the calm (<5 mph) conditions specified in T.S. 4.7.C.1.c, the orderly shutdown was performed as a conservative measure. After repairs were completed, the SCLRT was satisfactorily completed.

Safety significance of this event was minimal since the Reactor Buildings were maintained at a negative pressure with respect to the atmosphere at all times. This was a first occurrence of this type.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				Page (3)			
		Year	Sequential Number	Revision Number					
Dresden Nuclear Power Station, Unit 2	0 5 0 0 0 2 3 7	8 7	-	0 2 8	-	0 0	0 3	OF	0 4

TEXT

As T.S. 3.7.C.3 gives no specific time limit to meet these conditions, T.S. 3.0.A (which delineates the action to be taken for circumstances not directly provided for in the limiting condition for operation statements) applies. In the event a limiting condition for operation cannot be satisfied because of circumstances in excess of those addressed in the specification, T.S. 3.0.A states that the unit shall be placed in at least hot shutdown within 12 hours and in cold shutdown within the following 24 hours unless corrective measures are completed that satisfy the limiting conditions for operation. Although the ambient wind conditions during performance of the SCLRT were in excess of the calm (<5 mph) conditions specified in T.S. 4.7.C.1.c, the orderly plant shutdowns were completed as a conservative measure. Both units had been placed in cold shutdown by 1825 hours on September 18, 1987.

C. APPARENT CAUSE OF EVENT:

This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(A), which requires the reporting of the completion of any nuclear plant shutdown required by the plant's Technical Specifications and 10 CFR 50.73(a)(2)(i)(B), which requires the reporting of any operation or condition prohibited by the plant's Technical Specifications.

The root cause of the inability to maintain sufficient Reactor Building differential pressure with respect to the atmosphere was in-leakage into the Reactor Buildings. In-leakage was observed at the following Reactor Building to Turbine Building pipe penetration boot seals.

1. Boot seal on the 24 inch service water supply line 3-3902-24" at penetration F-74-36.
2. Boot seal on 24 inch Unit 3 main steam lines 3001A-24" and 3001B-24".
3. Boot seal on 24 inch Unit 2 main steam lines 3001A-24" and 3001C-24".
4. Boot seal on 18 inch Unit 2 feedwater line 3204B-18.

Also identified were a variety of in-leakage paths between certain wall panels on the refueling floor, from around the interlock doors from the Turbine Buildings into the Reactor Buildings, and from the Reactor Building trackway interlock doors.

The SCLRT was last performed on November 23, 1986, with satisfactory results. The penetration boot seals are believed to have torn due to aging; the door seals were degraded during normal use.

D. SAFETY ANALYSIS OF EVENT:

The Reactor Buildings were maintained at a negative pressure at all times with respect to the atmosphere, which would have prevented any exfiltration of contamination to the atmosphere. An inspection of the secondary containment and an SCLRT were performed, and when 0.25 inches of water differential pressure could not be maintained, the shutdown of both units was promptly performed. For these reasons, the safety significance of this event was minimal.

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		Year	///	Sequential Number	///	Revision Number			
Dresden Nuclear Power Station, Unit 2	0 5 0 0 0 2 3 7	8 7	-	0 2 8	-	0 0	0 4	OF	0 4
TEXT									

E. CORRECTIVE ACTIONS:

Repairs to the in-leakage paths were implemented, and the SCLRT was again performed on September 21, 1987 with satisfactory results. The following long term corrective actions are also in progress.

1. The Mechanical Maintenance Department is performing a detailed inspection of the refueling floor metal walls using a portable inspection rig. Any additional in-leakage paths identified during this program will be repaired.
2. The Mechanical Maintenance Department is developing improvements to the Reactor Building trackway door sealing mechanisms.
3. The Technical Staff will implement a routine check of the personnel interlock and Reactor Building trackway doors in order to verify that their sealing surfaces have not become degraded.
4. The SCLRT will continue to be performed at each refueling outage. The SCLRT procedure will also be revised to include an inspection of the secondary containment.

F. PREVIOUS OCCURRENCES:

None noted.

G. COMPONENT FAILURE DATA:

Degradation of various seals as noted in Section C. above. These components utilize seal material types specified in the original construction seal and hardware schedules.



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USNRC-DS

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Licensee Event Report #87-028-0, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(i)(A) and 50.73(a)(2)(i)(B).

E.D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE/kjl

Enclosure

cc: A. Bert Davis, Regional Administrator, Region III
File/NRC
File/Numerical

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