

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 3
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TITLE (4)
Unit 2 Primary Containment Type "B" and "C" Local Leak Rate Test Limit Exceeded Due to Excessive Leakage Through Primary Containment Isolation Valve

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		
0 1	0 8	8 7	8 7	0 0 4	0 1	0 5	1 8	8 7	N/A		
									DOCKET NUMBER(S) 0 5 0 0 0		

OPERATING MODE (9) N

POWER LEVEL (10) 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.406(c)	50.73(a)(2)(iv)	73.71(b)
20.406(a)(1)(i)	50.36(e)(1)	50.73(a)(2)(v)	73.71(c)
20.406(a)(1)(ii)	50.36(e)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
20.406(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Brian C. McCabe Technical Staff Engineer	TELEPHONE NUMBER AREA CODE 8 1 5 9 4 2 - 2 9 2 0
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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	B 0	I S V	C 3 1 1	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (if yes, complete EXPECTED SUBMISSION DATE) NO X

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On 1/8/87 at 1000 hours, with Unit 2 in a refueling outage and during the performance of Dresden Technical Staff Surveillance Procedure DTS 1600-1, "Local Leak Rate Testing of Primary Containment Isolation Valves", the torus to condenser drain valve A02-1599-61 leaked 135.985 SCFH. This brought the total "as found" leakage using the maximum pathway method for Type "B" and "C" testing to 504.404 SCFH, which exceeds the Technical Specifications limit of 493.116 SCFH. Work Request #D60940 was initiated by Technical Staff personnel to repair the valve.

The cause of the excessive leakage from the A02-1599-61 valve has been attributed to foreign particles invading the valve seat. These particles prevented an adequate sealing surface between the seat and the disc and thus resulted in excess leakage through the valve. The safety significance is considered minimal because the in-line primary containment isolation valve, A02-1599-62 demonstrated insignificant leakage (5.571 SCFH). Therefore, the "through" leakage, which is more representative of actual containment leakage, was minimal. In order to correct the problem, the valve was cleaned and lapped. No further problems were identified. The previous occurrence of this type is documented in Reportable Occurrence #85-21 on Docket #050249.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Dresden Nuclear Power Station, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 2 3 7	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 7	— 0 0 4	— 0 0	0 2	OF	0 3

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

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2527 MWt rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

EVENT IDENTIFICATION:

Unit 2 Primary Containment [NH] Type "B" and "C" Local Leak Rate Test Limit Exceeded Due to Excessive Leakage Through Primary Containment Isolation Valve.

A. PLANT CONDITIONS PRIOR TO EVENT:

Mode: N - Refuel

Reactor Power: 0%

RCS Temperature/Pressure: 80°F/0 psig

B. DESCRIPTION OF EVENT:

On 1/8/87 at 1000 hours, during the performance of Dresden Technical Staff Surveillance Procedure (DTS) 1600-1, "Local Leak Rate Testing of Primary Containment Isolation Valves", the torus [BS] to condenser [SG] drain valve A02-1599-61 leaked 135.985 SCFH. This brings the total "as-found" leakage using the maximum pathway method for Type "B" and "C" testing to 504.404 SCFH, which exceeds the Technical Specification's limit of 493.116 SCFH. Work Request #D60940 was initiated by Technical Staff personnel to repair the valve.

C. CAUSE OF EVENT:

The cause of the excessive leakage from the torus to condenser drain valve has been attributed to a small amount of foreign material invading the valve seating surfaces. Upon inspection of A02-1599-61 per Work Request #D60940, the Mechanical Maintenance Department discovered foreign particles on the valve seat. These particles prevented an adequate sealing surface between the seat and disc and thus resulted in leakage through the A02-1599-61 valve. It is believed that the foreign particles may have resulted from small amounts of flaking of the suppression pool (torus) paint.

D. SAFETY ANALYSIS:

The safety significance is considered minimal because the in-line primary containment isolation valve, A02-1599-62 demonstrated insignificant leakage. Following the repair of the A02-1599-61 valve, the A02-1599-61 and 62 were retested per DTS 1600-1. The measured leak rate was calculated to be 5.571 SCFH. Therefore, the maximum "through" leakage past the A02-1599-61 and 62 was 5.571 SCFH which is below procedural and Technical Specification limits and is considered minimal. The Type A "through" leakage, calculated using the Minimum Pathway Method, is more representative of actual containment leakage. The total "as-found" and "as-left" leak rates for Type B and C testing were calculated to be 878.843 SCFH and 387.346 SCFH respectively using Maximum Pathway Methodology. The Technical Specification limit for Type B and C testing is 493.116 SCFH (0.6 La). The total "as-found" and "as left" leak rates for Type A testing were calculated to be 392.384 SCFH and 325.039 SCFH respectively using Minimum

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Dresden Nuclear Power Station, Unit 2	DOCKET NUMBER (2) 05000237	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 388A's) (17)

Pathway Methodology and primary containment integrated leak rate test results. These leak rates are well below the Technical Specification limit for Type A testing of 616.392 SCFH (0.75 La).

E. CORRECTIVE ACTIONS:

Upon inspection of A02-1599-61, per Work Request #D60940, the Mechanical Maintenance Department found that the cause of the excessive leakage was a result of foreign particles invading the valve seat. These particles prevented an adequate sealing surface between the seat and the disc. In order to correct this problem, the valve was cleaned and then lapped. The lapping was performed as a conservative measure since it was possible that the valve seat had been scratched by the foreign particles. The torus was cleaned and appropriate areas were repainted during the refueling outage. This action should prevent any recurrences of this type. Furthermore, the valve and associated piping were inspected for mechanical and electrical defects as well as the presence of foreign material. No further problems were identified. Additionally, no other valves which penetrate the torus failed their Local Leak Rate Tests as a result of foreign material on the valve seating surfaces. Following the completion of the repairs, on 3/4/87, at 1330 hours, a Local Leak Rate Test was performed on the A02-1599-61 and 62 valves per DTS 1600-1. The measured leak rate was calculated to be 5.571 SCFH which is well below procedural (30.82 SCFH) and Technical Specification (493.116 SCFH) limits. Because no mechanical or electrical discrepancies were found with the A02-1599-61 valve and this is the first occurrence in which foreign material has inhibited its primary containment isolation function, no further corrective actions were deemed necessary.

F. PREVIOUS OCCURRENCES:

The previous occurrences in which the primary containment Type "B" and "C" leakage totals exceeded the Technical Specification limit of 493.116 SCFH are documented in the following Reportable Occurrences.

<u>LER Number</u>	<u>Title</u>
50-249/85-21	Primary Containment Leakage Through Relief Valve RV-3-8526
50-237/84-023	Failure of Primary Containment Type "B" and "C" Leak Testing
50-249/84-19	"As-Found" Type "B" and "C" Tests Greater Than .6 _{La}

G. COMPONENT FAILURE DATA:

This valve has been reviewed through NPRDS and it has not, to this date, been a generic problem throughout the utility industry. The failure of this valve has been reported to NPRDS in this supplement to the investigation report. A review of station maintenance documents showed that the A02-1599-61 did fail a leak rate test on 12/11/84 as outlined in Reportable Occurrence 84-023 but no generic or recurring problems have been identified.

Manufacturer: Chicago Fluid Power Corporation
 Nomenclature: Valve
 Model Number: Chicago Fluid Power Corp. Model #A-24
 Mfg. Part #: N/A



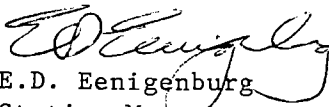
Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

May 18, 1987

EDE LTR #87-326

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

Licensee Event Report #87-004-1, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(i)(B). This revised report is submitted to include the final Type B and C Local Leak Rate Test results for Dresden Unit 2, as well as the corrective actions taken for torus to condenser drain valve A02-1599-61 leakage.


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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11